JVC

SERVICE MANUAL

S-VHS VIDEO CASSETTE RECORDER

BR-S800U/BR-S500U

(S-VHS VIDEO CASSETTE RECORDER) (S-VHS VIDEO CASSETTE PLAYER)

BR-S800U

BR-S500U

SVHS Hi-Fi

SPECIFICATIONS

GENERAL

Format	: VHS/S-VHS standard
Signal system	: NTSC color signal
Recording & Playback mode	: Recording: SP, Playback: SP/EP (BR-S800U) Playback: SP/EP (BR-S500U)
Tape speed	: 33.35 mm/s
Recording & Playback time	: Recording: 120 min./Playback: 360 min.(EP) (BR-S800U) Playback: 360 min.(EP) (BR-S500U)
Fast forward/Rewind time	: Less then 2.5 min. for 120 min. tape
Power requirement	: 120 V AC, 50/60 Hz
Power consumption	: 49 W (58 W when using RM-G800U) (BR-S800U) 40 W (49 W when using RM-G800U) (BR-S500U)
Dimensions	: 430 (W) X 149.5 (H) X 460 (D) mm (16-15/16" X 5-15/16" X 18-1/8")
Weight	: Approx. 11.5 kg (25.4 lbs)
Operating temperature	: 5°C to 40°C (41°F to 104°F)
Storage temperature	: –20°C to 60°C (–4°F to 140°F)
Humidity	: 30% to 80%

VIDEO

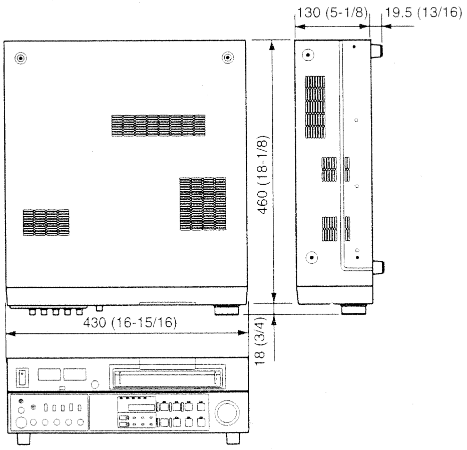
Composite IN	: 0.5 to 2.0 Vp-p, 75 ohms, unbalanced (BR-S800U)
Y/C IN	: Y: 1.0 Vp-p, 75 ohms, unbalanced (BR-S800U) C: 0.286 Vp-p, 75 ohms, unbalanced (Burst)
Composite OUT	: 1.0 Vp-p, 75 ohms, unbalanced
Y/C OUT	: Y: 1.0 Vp-p, 75 ohms, unbalanced C: 0.286 Vp-p, 75 ohms, unbalanced (Burst)
External sync IN	: 0.5 to 4.0 Vp-p, 75 ohms, unbalanced
Horizontal resolution	: More then 400 lines (S-VHS)/240 lines (VHS)
Signal-to-noise ratio	: 46 dB (S-VHS)/45 dB (VHS)

AUDIO

Number tracks	: 4 (Hi-Fi X 2, Normal X 2)
Line IN	: –6 dBs, 10 k-ohms, unbalanced (BR-S800U)
Mic IN	: –67 dBs, 3 k-ohms, unbalanced (BR-S800U)
Line OUT	: –6 dBs, 1 k-ohm, unbalanced
Phones OUT	: – ∞ to –20 dBs, 8 ohms, unbalanced, stereo

Hi-Fi audio	
Frequency response	: 20 to 20,000 Hz
Dynamic range	: More than 85 dB
Wow & flutter	: Less than 0.006% WRMS
Normal audio	
Frequency response	: 50 to 10,000 Hz
Signal-to-noise ratio	: More than 40 dB (NR-off, at 3% distortion)
Wow & flutter	: Less than 0.20% WRMS (Normal)
ACCESSORY	: Power Cord

DIMENSIONS
Unit: mm (inches)



Specifications shown are in SP mode unless otherwise specified.
Design and specifications subject to change notice.

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No. 9289
April 1994

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: **Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.**

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:

1) Insulation Tape	3) Spacers	5) Barrier
2) PVC tubing	4) Insulation sheets for transistors	

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

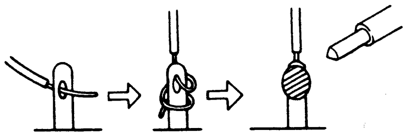


Fig. 1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10—15 kg of force in any direction will not loosen it.

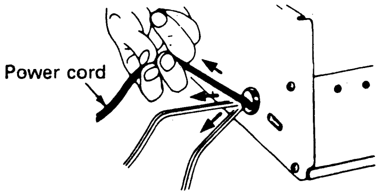


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.
    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

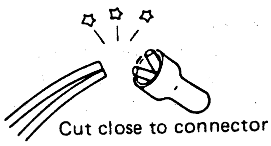


Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

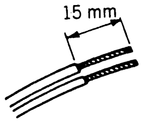


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

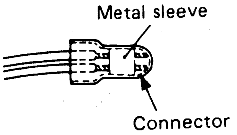


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

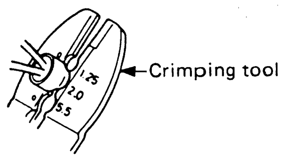


Fig. 6

(5) Check the four points noted in Fig. 7.

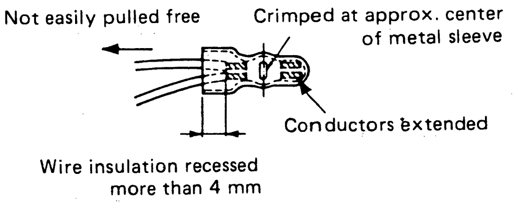

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig. 7

Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

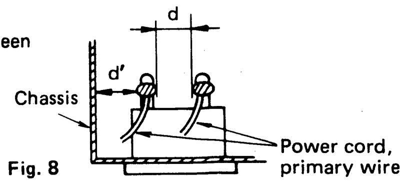


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method: (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

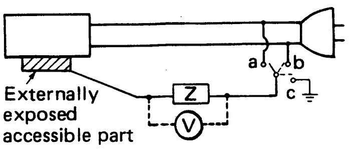


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

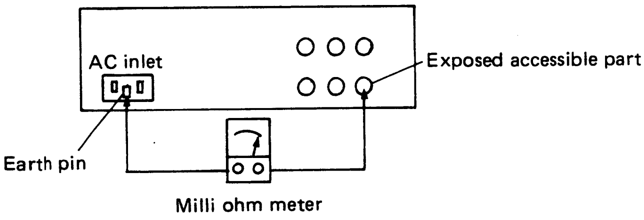


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	–	AC 900 V 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ /500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

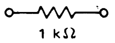
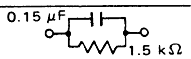
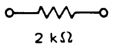
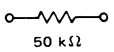
AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan		i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada		i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia		i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
			i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

INSTRUCTIONS

JVC

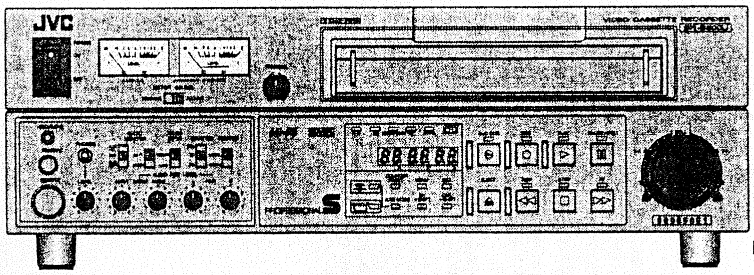
BR-S800U

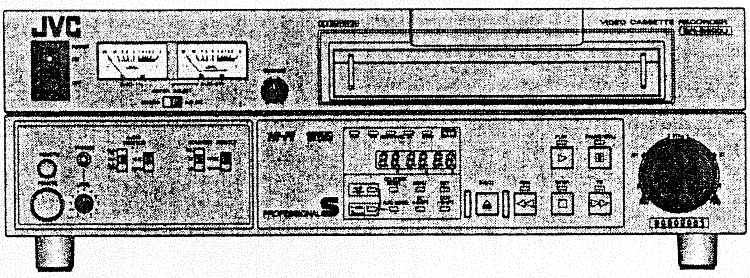
VIDEO CASSETTE RECORDER

BR-S500U

VIDEO CASSETTE PLAYER

S VHS Hi-Fi


BR-S800U


BR-S500U

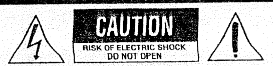
For Custormer Use:
Enter below the Serial No. which is located on the rear of the cabinet. Retain this inforamtion for future reference.

Model No. **BR-800U/BR-S500U**

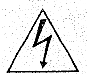
Serial No. ____________________

PGD30002-440-01

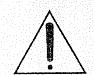
SAFETY PRECAUTIONS



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INDIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

This unit should be used with 120 V AC only.

CAUTION:
To prevent electric shocks and fire hazards, do NOT use any other power source.

NOTE:
The rating plate (serial number plate) is on the rear of the unit.

INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

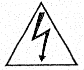
CAUTION

CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

ATTENTION
RISQUE D'ELECTROCUTION
NE PAS OUVRIR

ATTENTION: POUR EVITER TOUT RISQUE D'ELECTROCUTION
NE PAS OUVRIR LE BOITER.
AUCUNE PIECE INTERIEURE N'EST
A REGLER PAR L'UTILISATEUR.
SE REFERER A UN AGENT QUALIFIE EN CAS DE PROBLEME.



Le symbole de l'éclair à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'une "tension dangereuse" non isolée dans le boîtier du produit. Cette tension est suffisante pour provoquer l'électrocution de personnes.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'opérations d'entretien importantes au sujet desquelles des renseignements se trouvent dans le manuel d'instructions.

*Ces symboles ne sont utilisés qu'aux Etats-Unis.

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

Ce magnétoscope ne doit être utilisé que sur du courant alternatif en 120 V.

ATTENTION:
Afin d'éviter tout resque d'incendie ou d'électrocution, ne pas utiliser d'autres sources d'alimentation électrique.

REMARQUE:
La plaque d'identification (numéro de série) se trouve sur le panneau arrière de l'appareil.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

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1 INTRODUCTION

1-1 ABOUT THIS MANUAL

This manual introduces you to the BR-S800U S-VHS Recorder and the BR-S500U S-VHS Player. The BR-S500U is a playback-only VCR. It does not have the recording capability of the BR-S800U. Read this manual carefully before setting up and operating the BR-S800U/BR-S500U. This manual consists of the following sections.

Section 1 INTRODUCTION
This section describes the organization of this manual and explains the main features and the precautions you should take when operating the BR-S800U/BR-S500U.

Section 2 CONTROLS, CONNECTORS, AND DISPLAYS
A basic description of all controls, connectors, and displays. If you are already familiar with professional editing techniques and know how to use a professional VCR, you will probably be able to start operating your VCR after you read this section.

Section 3 CONNECTIONS
This section describes how to connect the BR-S800U/BR-S500U to other units.

Section 4 MENU SWITCH SETTING
The BR-S800U/BR-S500U incorporate a “Menu Switch” function which lets you customize the VCR according to your requirements with a variety of settings on screen. Setting procedures and setting items are described in this section.

Section 5 LOADING/UNLOADING
This section describes how to load or unload video cassettes.

Section 6 PLAYBACK
This section describes preparations and settings for playback.

Section 7 RECORDING
This section describes preparations and settings for recording. This section can be omitted by BR-S500U users.

Section 8 EDITING WITH RM-G800U (option)
This section outlines editing procedures when using the BR-S800U/BR-S500U in combination with the optional editing controller RM-G800U. Refer to the RM-G800U's manual for details.

Section 9 IN CASE OF DIFFICULTY
This section suggests ways to respond to potential difficulties or malfunctions of your VCR.

Section 10 OPTIONAL ACCESSORIES
Optional boards and accessories are shown in this section.

Section 11 APPENDIX
This sections explains the terms which are used in this manual.

Section 12 SPECIFICATIONS
Specifications of the BR-S800U and BR-S500U are shown in this section.

Any description in this manual indicated as "BR-S800U only" refers to instructions applicable only to the BR-S800U. All VCR illustrations used in this manual are of the BR-S800U.

1-2 MAIN FEATURES

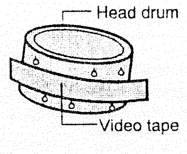
- The BR-S800U/BR-S500U offer the performance and functions required of professional VCRs.
- Rugged construction with DD (Direct Drive) motor and aluminum diecast chassis for professional use.
- A simple, low-cost editing system can be configured by combining the BR-S800U and BR-S500U with the optional RM-G800U editing controller.
- A built-in CTL time code generator/reader permits accurate editing is possible in combination with the RM-G800U. (CTL time code setting is only possible with the RM-G800U.)
- Easy system upgradeability with a variety of optional boards.

A Y/C filtering technique incorporated under license from FAROUDJA Laboratories.

1-3 PRECAUTIONS

VCR

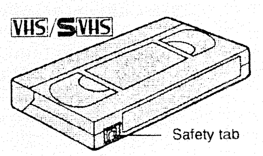
- DO NOT use the recorder in places subject to the following conditions:
  - extreme heat, cold, or humidity,
  - dust,
  - near appliances generating strong magnetic fields,
  - vibrations, or
  - poor ventilation.
- Be careful of moisture condensation.
  DO NOT use the recorder immediately after moving it from a cold place to a warm place. This will cause water vapor to condense on the still-cold video head drum and tape guides and may damage the tape and the recorder.
  If condensation occurs, the warning code “021” appears on the counter and the cassette is ejected. (☞p.47) The drum will start rotating to dry the head drums. Keep the VCR power on until the warning code turns off.



- Handle the recorder carefully.
  - DO NOT block the ventilation openings.
  - DO NOT place anything heavy on the recorder.
  - DO NOT place liquids on the top of the recorder.
  - Use in horizontal (flat) position only.
- During transportation,
  - Avoid excessive shocks to the recorder during packing and transportation.
  - Before packing, be sure to remove the cassette from the recorder.
- Proper maintenance such as cleaning dust, adding oil, or replacing parts are necessary to obtain optimum performance and a longer service life.
  We recommend you do maintenance on a regular basis (once every 500 hours). Total drum rotation hours can be checked via on-screen display. (☞p.17)

VIDEO CASSETTES

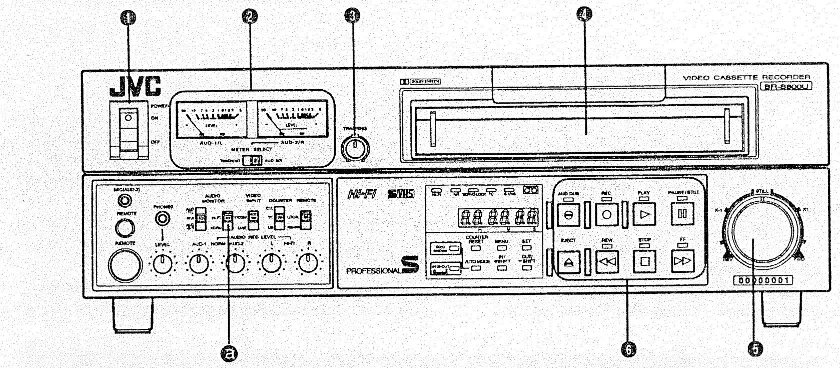
- This recorder uses S-VHS and VHS cassettes.
  S-VHS: ST-120 for 120 minutes, ST-90 for 90 minutes, ST-60 for 60 minutes, and ST-30 for 30 minutes.
  VHS: T-120 for 120 minutes, T-90 for 90 minutes, T-60 for 60 minutes, and T-30 for 30 minutes.
  An optional cassette adapter (SA-CP11U) is required when using C-size cassettes. Use ST-C30/C20 or T-C30/20 cassettes.
  Do not use T-210 (210 minutes) cassettes or anything longer.
- DO NOT expose the cassettes to direct sunlight. Keep them away from heaters.
- DO NOT expose the cassettes to extreme humidity, violent vibrations or shocks, strong magnetic fields (near a motor, transformer or magnet), or excessive dust.
- Place the cassettes in cassette cases and position vertically.
- To prevent accidental erasure, remove the cassette's safety tab. To record on a cassette whose safety tab has been removed, cover the hole with adhesive tape.



WARNING:
It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast, or cable program and in any literary, dramatic, musical, or artistic work embodied therein.

2-1 FRONT PANEL

Illustration shows BR-S800U



① POWER switch

Turns the power ON or OFF. When power is ON, the time counter and level meters will be illuminated.

② Level meter section

[AUD-1/L] Audio-1/L-ch level meter

Indicates the audio level of the normal audio-1 or Hi-Fi left-channel signal during recording and playback. Hi-Fi/Normal is selectable with the AUDIO MONITOR Hi-Fi/NORMAL switch ⓐ.

[AUD-2/R] Audio-2/R-ch level meter/METER SELECT switch

Depending on the setting of the METER SELECT switch, this indication changes as shown below.

AUD-2/R: Indicates the audio level of the normal audio-2 or H-Fi right-channel signal during recording and playback.

TRACKING: Indicates video FM level as a tracking meter during playback.

③ TRACKING control

Adjusts tracking. Turn in either direction during playback until the tracking meter deflects all the way to right. Functions as a V.Lock adjustment control in the Still mode and as a tracking adjustment control in slow-motion playback. (☞p.36)

④ Cassette loading slot

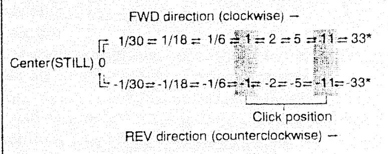
For insertion and removal of the video cassettes.

⑤ Search dial

Used for search while in the Play or Still mode. The dial stays in the last set position even if the mode is changed during search.

Tape speed varies as shown below depending on the position the dial is turned to. (*Step slow mode)

*Slow mode is selectable via Menu switch No. 337.



*Selectable via Menu switch No.340.

2-1 FRONT PANEL

⑥ Operation buttons

[AUD DUB] button (BR-S800U only)

Used for audio dubbing on the normal audio-2 track*.

To start audio dubbing: Press PLAY while pressing this button in the Play or Still mode. Audio dubbing will start and the AUD DUB indicator will light.

To temporarily stop audio dubbing: Press PAUSE/STILL.

To re-start audio dubbing: Press PLAY.

*Selectable via Menu switch No.208.

[REC] button (BR-S800U only)

To start recording: Press PLAY while pressing this button in the Stop mode. Recording will start and the REC and PLAY indicators will light.

To temporarily stop recording: Press PAUSE/STILL. The PAUSE/STILL indicator will light and recording will be paused.

To re-start recording: Press PLAY.

E-E function: When this button is pressed during playback, the monitor screen switches from the playback picture to the E-E picture so that the input signal can be monitored.

[PLAY] button

To start playback: Press in the Stop mode. Playback will start and the PLAY indicator will light.

To pause playback: Press PAUSE/STILL. The PAUSE/STILL indicator will light and a still picture will be produced.

To re-start playback: Press this button.

Reference pages

Audio dubbing	p.41
Recording	p.38
Playback	p.34

MENU SWITCHES

In addition to switches on the front panel, the BR-S800U/BR-S500U incorporate a comprehensive set of Menu switches for more flexible VCR setup.

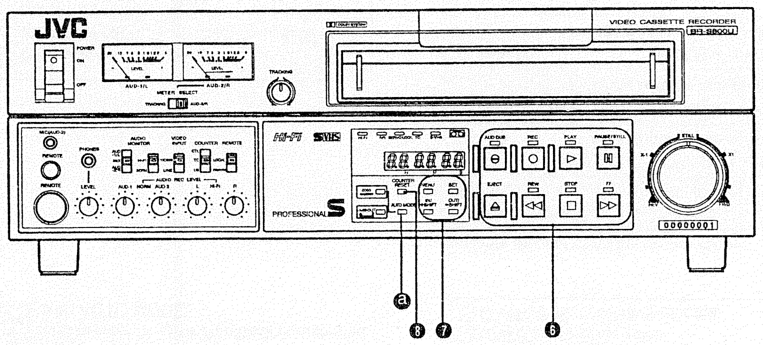
For setting items related to the functions described on this page, the following Menu switches are available.

	Page reference
●Search	
No.204 Hi-Fi OUT AT SEARCH	30
No.301 DIRECT SEARCH	31
No.337 SLOW MODE	32
No.340 SEARCH SPEED	32
●Audio dubbing	
No.208 AUDIO DUB SELECT	29
No.339 A.DUB ENABLE AT LTC	32
●Recording	
Servo	
No.003 SYNC SELECT	28
No.004 AUTO H. PHASE	30
Video	
No.100 S-VHS SELECT	28
No.101 EDIT SELECT	28
Audio	
No.200 Hi-Fi AUDIO REC	29
No.201 NORM. AUDIO DOLBY NR	29
No.202 AUDIO LIMITER	29
No.205 AUDIO-1 REC	29
No.206 AUD-2/LTC	30
No.207 AUDIO INPUT SELECT	30
No.208 AUDIO DUB SELECT	29
No.339 A.DUB ENABLE AT LTC	32
System	
No.302 AUTO REC. PREROLL	31
No.304 RECORDING INHIBIT	31
No.305 REPEAT REC.	31
●Playback	
Servo	
No.001 TBC CONNECT	30
No.003 SYNC SELECT	28
No.004 AUTO H. PHASE	30
Video	
No.101 EDIT SELECT	28
Audio	
No.201 NORM. AUDIO DOLBY NR	29
No.203 AUDIO OUT SELECT	30
No.206 AUD-2/LTC	30

☞p.54 GLOSSARY: E-E picture

2-1 FRONT PANEL

Illustration shows BR-S800U



❻ Operation buttons

[PAUSE/STILL] button

During recording: Press to temporarily stop recording. The PAUSE/STILL indicator will light.

During playback: Press to produce a still picture. The PAUSE/STILL indicator will light.

During Still: Press to advance the frame.

[EJECT] button

To eject a cassette: Press this button. The modes in which the cassette can be ejected are slectable via the Menu switch.

[REW] button

To rewind: Press this button. The REW indicator will light and the tape is rewound at 100X normal speed. Monitor screen switches to E-E picture during rewind. REW speed is selectable via the Menu switch.

[STOP] button

To stop the tape: Press this button. Tape stops and the STOP indicator lights. Monitor screen switches to E-E picture.

[FF] button

To fast forward: Press this button. The FF indicator will light and the tape is fast-forwarded at about 100X normal speed. Monitor screen switches to E-E picture during fast-forward. FF speed is selectable via the Menu switch.

MENU SWITCHES

In addition to switches on the front panel, the BR-S800U/BR-S500U incorporate a comprehensive set of Menu switches for more flexible VCR setup.
For setting items related to the functions described on this page, the following Menu switches are available.

	Page reference
●Eject	
No.300 DIRECT EJECT	31
●REW/FF	
No.312 MODE AT TAPE END	31
No.319 TAPE MAX SPEED	31

2-1 FRONT PANEL

❼ Menu switch/Repeat play setting buttons

[MENU] button

MENU To switch to Menu switch setting mode: Press this button.

To return to time counter: Press again.

To switch to Menu switch-2 setting mode: Press after setting Menu switch No.338 "MEMORY SW-2" to "OPEN".

To switch to hour meter display: Set Menu switch No.909. (☞p.17)

[SET] button

SET Sets data in Menu switch setting. Also used to set the repeat playback start or end point when pressed together with the IN/+SHIFT or OUT/–SHIFT button.

[IN/+SHIFT] button

IN/+SHIFT During Menu switch setting: Press to advance Menu number.

In Repeat Playback mode: After Repeat Playback mode is engaged with the AUTO MODE button ⓐ, press SET together with this button to set the repeat playback start point.

[OUT/–SHIFT] button

OUT/–SHIFT During Menu switch setting: Press to reverse Menu number.

In Repeat Playback mode: After Repeat Playback mode is engaged with the AUTO MODE button ⓐ, press SET together with this button to set the repeat playback end point.

❽ COUNTER RESET button

COUNTER RESET To reset CTL time counter to "0:00:00": Press this button.

In Repeat Playback mode: Press this button to simultaneously reset playback start/end point. To reset the start point only, press this button while pressing IN/+SHIFT. To reset the out point only, press this button while pressing OUT/–SHIFT.

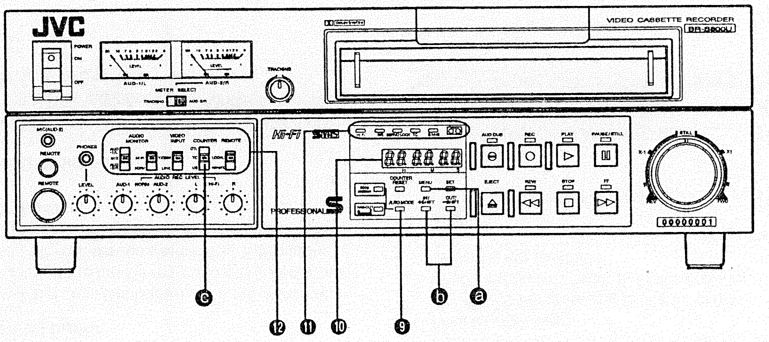
With timecode/user bit display: No effect.

Reference pages

Repeat playback	p.37
Menu switch setting	p.24
Hour meter display	p.17

2-1 FRONT PANEL

Illustration shows BR-S800U



⑨ AUTO MODE button with indicators

[AUTO MODE] button

AUTO MODE

Each time this button is pressed, the auto operation mode changes as follows:

Counter search: Tape will automatically stop at counter "0:00:00" position during rewind or fast-forward.

Repeat playback: Engages repeat playback operation after start/end points have been entered.

No indicator light: No auto operation is engaged.

Counter search indicator

Lights when Counter Search mode is activated with AUTO MODE.

Repeat indicator

Lights when Repeat Playback is activated with AUTO MODE.

Reference pages

Counter search p.37
Repeat playback p.37
Displays p.16

⑩ Counter display

88 88 88
H M S

Usually displays tape time, time code, and user bits. When the MENU button ⓐ is pressed, display changes to Menu switch setting. Also displays the preset repeat playback start or end point when the IN/+SHIFT or OUT/–SHIFT button ⓑ is pressed.

Counter mode: With the COUNTER switch ⓒ, the counter display changes as follows:

CTL time counter
CTL time code data
CTL time code user bit data

When LTC/VITC board SA-R50U (optional) is installed: With the COUNTER switch ⓒ, the counter display changes as follows:

CTL time counter
LTC/VITC time code data
LTC/VITC time code user bit data

Available display of each counter mode:

CTL time counter	–9:59:59 — 9:59:59 (hours, minutes, seconds)
CTL/LTC/VITC time code	00:00:00 — 23:59:59 (hours, minutes, seconds)
LTC/VITC user bit	00 00 00 — FF FF FF (First 6 digits can be displayed)
CTL user bit	00 00 — FF FF (All 4 digits can be displayed.)

2-1 FRONT PANEL

⑪ LED indicators

[Hi-Fi] indicator

Hi-Fi

Lights when recording Hi-Fi audio or when playing back a Hi-Fi-recorded tape. Also lights in the E-E mode when the Menu switch No.200 "Hi-Fi AUDIO REC." is set to "ON".

[NR] indicator

NR

Lights when Dolby* NR is ON (via Menu switch No.201).

[SERVO LOCK] indicator

SERVO LOCK

Lights when the capstan and drum servos are locked to the reference sync signal during playback and recording.

[TC] indicator

TC

Lights when the Menu switch No.206 "LTC SELECT" is set to "LTC".

[S-VHS] indicator

S-VHS

Lights when an S-VHS tape is inserted. Also lights when recording in the S-VHS mode or when playing back an S-VHS-recorded tape.

Turns off when recording in the VHS mode or when playing back a VHS-recorded tape.

"Cassette loaded" indicator

Lights when a cassette is loaded.

MENU SWITCHES

In addition to switches on the front panel, the BR-S800U/BR-S500U incorporate a comprehensive set of Menu switches for more flexible VCR setup.

For setting items related to the functions described on this page, the following Menu switches are available.

Page reference

●Hi-Fi audio recording
No.200 Hi-Fi AUDIO REC. 29

●Dolby NR setting
No.201 NORM. AUDIO DOLBY NR ... 29

●LTC
No.206 AUD-2/LTC 30

●VHS recording with S-VHS tape
No.100 S-VHS SELECT 28

⑫ Setting switches

[AUDIO MONITOR] select switches

AUDIO MONITOR
AUD-1/L
MIX
AUD-2/R
Hi-Fi
NORM

Selects audio output for the PHONES jack and the AUDIO MONITOR OUT connector. Audio level meters will switch corresponding to the setting of the Hi-Fi/NORM switch.

Hi-Fi:	To monitor the Hi-Fi audio signals. Audio level meters switch to Hi-Fi audio level meters.
NORM:	To monitor the normal audio signals. Audio level meters switch to normal audio level meters

AUD-1/L:	To monitor the normal audio-1 or Hi-Fi left-channel signal.
MIX:	To monitor the AUD-1/L and AUD-2/R signals together. The stereo signal is output from the PHONES jack. Output of mixed normal audio and Hi-Fi audio signals is not possible.
AUD-2/R:	To monitor the normal audio-2 or Hi-Fi right-channel signal.

[VIDEO INPUT] select switch (BR-S800U only)

VIDEO INPUT
Y/C358
LINE

Selects an input video signal.

LINE:	To select the composite video signal input to the VIDEO IN LINE connector.
Y/C358:	To select the separate Y/C signal input to the VIDEO IN Y/C358 connector.

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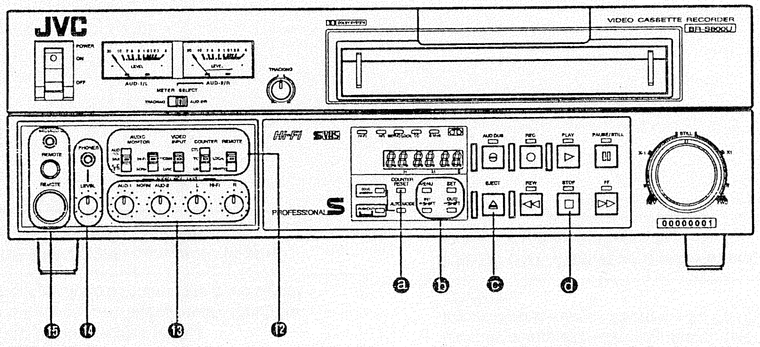
* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ᗡᗞ are trademarks of Dolby Laboratories Licensing Corporation.

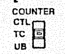
2-1 FRONT PANEL

Illustration shows BR-S800U


JVC
POWER
ON
OFF
LEVEL
AUD-1/L
AUD-2/R
METER SELECT
TRACKING
AUD-2/R
TRACKING
VIDEO CASSETTE RECORDER
BR-S800U
REMOTE
REMOTE
PHONES
LEVEL
AUDIO MONITOR
VIDEO INPUT
COUNTER
REMOTE
AUD-1
NORM
AUD-2
L
Hi-Fi
R
Hi-Fi
S-VHS
PROFESSIONAL S
COUNTER RESET
MENU
SET
AUTO MODE
AUD DUB
REC
PLAY
PAUSE/STILL
EJECT
REW
STOP
FF
STILL
00000001
ⓐ
ⓑ
ⓒ
ⓓ
⑮
⑭
⑬
⑫

⑫ **Setting switches**

[COUNTER] select switch

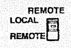

COUNTER
CTL
TC
UB

Selects counter display mode.

CTL:	Tape time based on CTL signals is displayed in hours, minutes, and seconds. (–9:59:59 — 9:59:59)
TC:	When LTC/VITC board SA-R50U (optional) is not installed: CTL time code is displayed in hours, minutes, and seconds.
	When LTC/VITC board SA-R50U (optional) is installed: LTC or VITC time code is displayed in hours, minutes, and seconds.
UB:	When LTC/VITC board SA-R50U (optional) is not installed: CTL time code user bits (4-digit) are displayed.
	When LTC/VITC board SA-R50U (optional) is installed: LTC or VITC time code user bits (first 6 digits) are displayed.

CTL time counter is displayed, when the tape is played back in the EP mode, even if the COUNTER select switch is set to "TC".

[REMOTE] select switch


REMOTE
LOCAL
REMOTE

Selects between remote and local control of the VCR.

LOCAL:	For direct control with the VCR's function buttons. Remote control (optional) is not operative.
REMOTE:	For remote control via the optional remote control connected to the REMOTE connector.

When REMOTE is selected:
The COUNTER RESET button ⓐ, menu switch setting buttons ⓑ, the EJECT button ⓒ, and the STOP button ⓓ are still operative. All other switches and controls (except the COUNTER select switch and the search dial) become inoperative.

☞ p.54 GLOSSARY: CTL

2-1 FRONT PANEL

⑬ **Audio recording level controls** (BR-S800U only)
Adjusts recording levels separately for the Hi-Fi left/right-channel signals and the normal audio-1/2 signals.

⑭ **Headphone jack with level control**

[PHONES] jack
For headphone connection (M 3.5, stereo). The audio signal selected with AUDIO MONITOR can be monitored.

[LEVEL] control
Adjusts signal level output from the PHONES jack.

⑮ **Microphone/Remote connectors**

[MIC] jack (BR-S800U only)
For microphone connection (M 3.5, mono). Normal audio-2 signal switches from line to microphone.

[REMOTE] connector (RCA)
For serial remote connection. Connect a remote control RM-G30U (optional). Set the REMOTE switch to "REMOTE".

[REMOTE] connector (12-pin)
For editing control. Connect an editing controller RM-G800U (optional). Set the REMOTE switch to "REMOTE".

MENU SWITCHES

In addition to switches on the front panel, the BR-S800U/BR-S500U incorporate a comprehensive set of Menu switches for more flexible VCR setup.
For setting items related to the functions described on this page, the following Menu switches are available.

Page reference

●**Audio recording**

No.200 Hi-Fi AUDIO REC	29
No.201 NORM. AUDIO DOLBY NR	29
No.202 AUDIO LIMITER	29
No.205 AUD-1 REC	29
No.206 AUD-2/LTC	30
No.207 AUDIO INPUT SELECT	30
No.208 AUD DUB SELECT	29

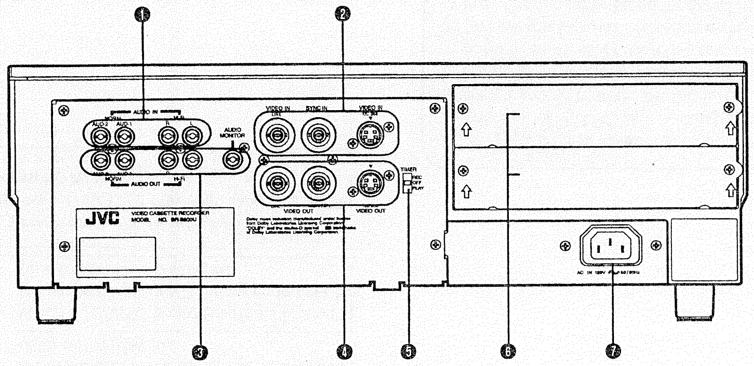
●**Audio playback**

No.203 AUDIO OUTPUT SELECT	30
No.204 Hi-Fi OUT AT SEARCH	30

When both REMOTE connectors are connected to remote controls:
VCR can be controlled by either remote control (if the REMOTE switch is set to "REMOTE".)

2-2 REAR PANEL

Illustration shows BR-S800U



① Audio input connectors

[AUDIO IN NORMAL] connectors (RCA) (BR-S800U only)
Accepts audio signals for recording on the normal audio track.

[AUDIO IN Hi-Fi] connectors (RCA) (BR-S800U only)
Accepts audio signals for recording on the Hi-Fi audio track*.
(*Selectable via Menu switch.)

② Video input connectors

[VIDEO IN LINE] connector (BR-S800U only)
Accepts composite video signals.

[SYNC IN] connector (BNC)
For reference sync signal input. Input the composite video or composite sync signal.

[VIDEO IN Y/C358] connector (4-pin)
Accepts separate Y/C signals.

③ Audio output connectors

[AUDIO OUT NORMAL] connectors (RCA)
AUD-1 and AUD-2 normal audio signals are output.

[AUDIO OUT Hi-Fi] connectors (RCA)
Hi-Fi left/right-channel audio signals are output*.
(*Selectable via Menu switch.)

[AUDIO MONITOR] connector (RCA)
Outputs the audio signal selected with the front panel AUDIO MONITOR switch (☞p.11).

④ Video output connectors

[VIDEO OUT LINE/MONITOR] connectors (BNC)
Outputs composite video signals. On-screen information is supplied from the MONITOR connector.

[VIDEO OUT Y/C358] connector (4-pin)
Outputs separate Y/C signals.

2-2 REAR PANEL

⑤ TIMER switch

Selects timer mode when an external timer is connected.

REC (BR-S800U only): The VCR automatically starts recording when power is supplied from the timer.

OFF: No timer operation.

PLAY: The VCR automatically starts playback when power is supplied from the timer.

⑥ Expansion slots

A variety of optional boards can be installed here to increase the unit's capabilities.

⑦ AC IN socket

Connect to 120 V AC, 50/60 Hz power outlet using the provided power cord.

MENU SWITCHES

In addition to switches on the front panel, the BR-S800U/BR-S500U incorporate a comprehensive set of Menu switches for more flexible VCR setup.
For setting items related to the functions described on this page, the following Menu switches are available.

Page reference

●Audio input

No.205 AUD-1 REC.	29
No.206 AUD-2/LTC	30
No.207 AUDIO INPUT SELECT	30
No.208 AUD DUB SELECT	29
No.339 A.DUB ENABLE AT LTC	32

●Video input

No.003 SYNC SELECT	28

●Audio output

No.203 AUDIO OUTPUT SELECT	30
No.204 Hi-Fi OUT AT SEARCH	30
No.206 AUD-2/LTC	30

●Servo

No.001 TBC CONNECT	30
No.003 SYNC SELECT	28

●On-screen display

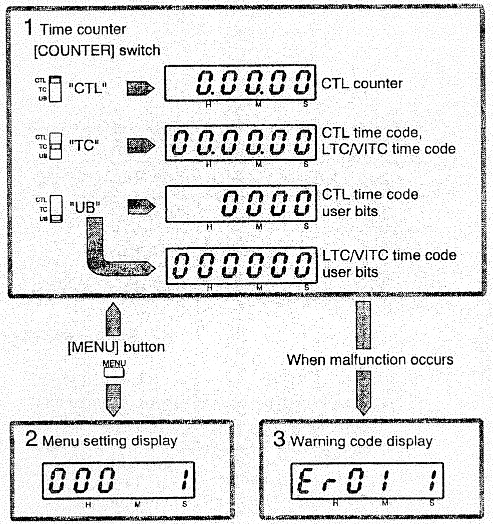
No.500 ON SCREEN DISPLAY	29
No.504 INFORMATION	33

Reference pages

External timer recording	p.42
External timer playback	p.38

☞ p.54 GLOSSARY: Time code, LTC

2-3 DISPLAYS


1 Time counter
[COUNTER] switch
CTL
TC
UB
"CTL"
0.00.00
H M S
CTL counter
"TC"
00.00.00
CTL time code,
LTC/VITC time code
"UB"
0000
CTL time code
user bits
000000
LTC/VITC time code
user bits
[MENU] button
MENU
When malfunction occurs
2 Menu setting display
000 1
3 Warning code display
Er01 1

Counter display

The BR-S800U/BR-S500U's counter is switchable between the following items.

1 Time counter
The counter usually functions as a tape time counter. If the MENU button is pressed, the counter changes to the Menu switch setting mode.

2 Menu setting display
For Menu switch setting. After setting Menu switches, press the MENU button to return to the tape time counter.

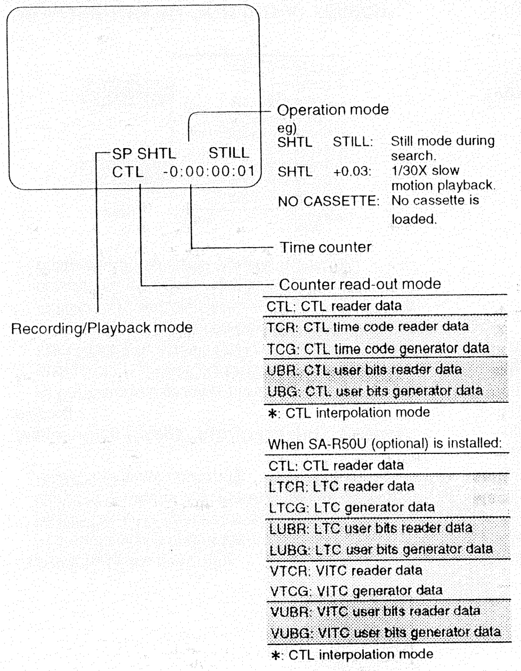
3 Warning code display
If a malfunction occurs, the corresponding numerical warning code is automatically displayed.

Time counter display
If the repeat playback start or end point has been set, the counter shows the start or end point when the IN/+SHIFT or OUT/–SHIFT button is pressed. (Setting the COUNTER switch to either "CTL" or "TC" is required.)

Reference pages
Menu switch setting p.24
Warning code display p.47

2-3 DISPLAYS

1 Mode displays/Time counter


SP SHTL STILL
CTL -0:00:00:01
Operation mode
eg)
SHTL STILL: Still mode during search.
SHTL +0.03: 1/30X slow motion playback.
NO CASSETTE: No cassette is loaded.
Time counter
Counter read-out mode
CTL: CTL reader data
TCR: CTL time code reader data
TCG: CTL time code generator data
UBR: CTL user bits reader data
UBG: CTL user bits generator data
∗: CTL interpolation mode
When SA-R50U (optional) is installed:
CTL: CTL reader data
LTCR: LTC reader data
LTCG: LTC generator data
LUBR: LTC user bits reader data
LUBG: LTC user bits generator data
VTCR: VITC reader data
VTCG: VITC generator data
VUBR: VITC user bits reader data
VUBG: VITC user bits generator data
∗: CTL interpolation mode
Recording/Playback mode

On-screen displays

On-screen information is available only via the rear panel VIDEO OUT MONITOR connector.

The following four display modes are available.

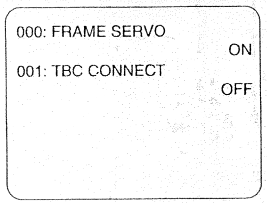
1 Mode displays/Time counter
Normal on-screen display. Time counter shows counter read-out data in hours, minutes, seconds, and frames. If the MENU button is pressed, the display changes to the Menu switch setting mode.
NOTE:
Due to the characteristics of the CTL time code, any discontinuity in existing CTL time code data (including user bits) during playback may result in an incorrect counter display reading for about two seconds at the point where the data changes.

2 Menu setting display
For Menu switch setting. After setting Menu switches, press the MENU button to return to the normal on-screen display.

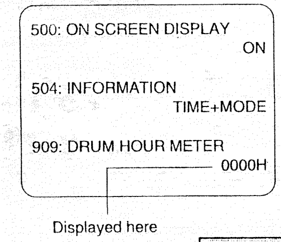
3 Hour meter data display
In the Menu setting mode, hour meter data is shown with Menu switch No.909. (Hour meter data is not displayed on the counter.)

4 Warning code display
If a malfunction occurs, the corresponding warning code is automatically displayed.

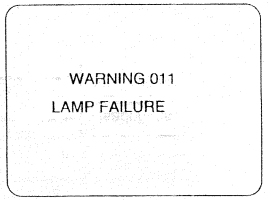
2 Menu setting display


000: FRAME SERVO
ON
001: TBC CONNECT
OFF

3 Hour meter data display


500: ON SCREEN DISPLAY
ON
504: INFORMATION
TIME+MODE
909: DRUM HOUR METER
0000H
Displayed here

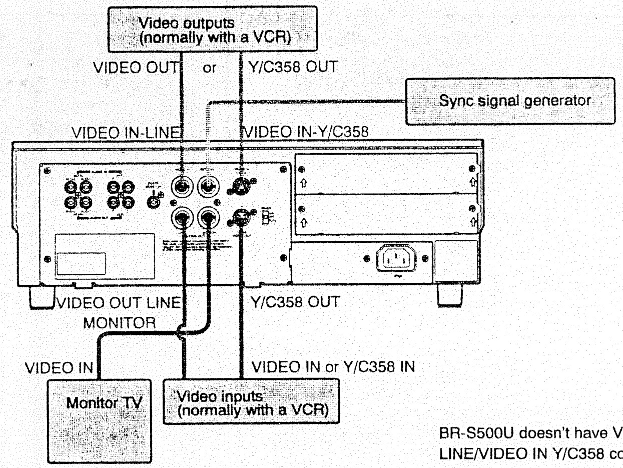
4 Warning code display


WARNING 011
LAMP FAILURE

Reference pages
Menu switch setting p.24
Warning code display p.47

3 CONNECTIONS

3-1 VIDEO SIGNAL


Video outputs (normally with a VCR)
VIDEO OUT
or
Y/C358 OUT
Sync signal generator
VIDEO IN-LINE
VIDEO IN-Y/C358
VIDEO OUT LINE
MONITOR
Y/C358 OUT
VIDEO IN
VIDEO IN or Y/C358 IN
Monitor TV
Video inputs (normally with a VCR)

BR-S500U doesn't have VIDEO IN LINE/VIDEO IN Y/C358 connectors.

Connection with a monitor

On-screen information can only be output from the VIDEO OUT MONITOR connector. So connect a monitor to it.

Y/C 358 connectors

If the units you're connecting to have Y/C 358 connectors, we recommend you use the Y/C connection to make the most of S-VHS picture performance.

Type of connectors

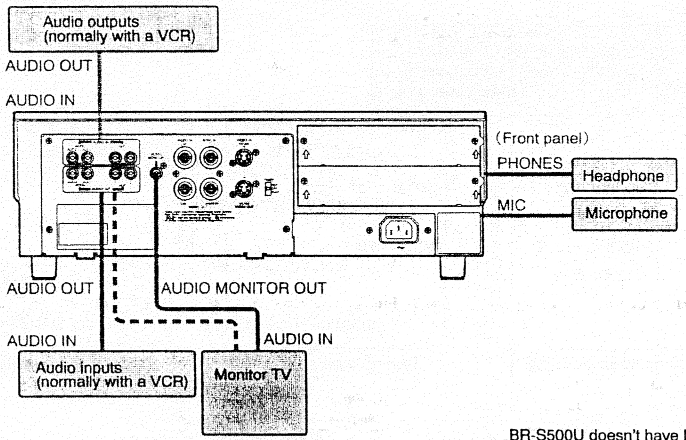
INPUT:	VIDEO IN LINE	BNC
	VIDEO IN Y/C358	4-PIN
	SYNC IN	BNC
OUTPUT:	VIDEO OUT LINE/MONITOR	BNC
	VIDEO OUT Y/C 358	4-PIN

Optional cables

A variety of optional cables suitable for different applications are available for Y/C connection.

	Connectors on connected units		
Model	Output	Input	length
VC-G30U	4-pin	4-pin	3 m
VC-G50U	4-pin	4-pin	5 m
VC-G3030U	4-pin	7-pin	3 m
VC-G2030U	7-pin	4-pin	3 m
VC-G2050U	7-pin	4-pin	5 m

3-2 AUDIO SIGNAL


Audio outputs (normally with a VCR)
AUDIO OUT
AUDIO IN
(Front panel)
PHONES
Headphone
MIC
Microphone
AUDIO OUT
AUDIO MONITOR OUT
AUDIO IN
AUDIO IN
Audio inputs (normally with a VCR)
Monitor TV

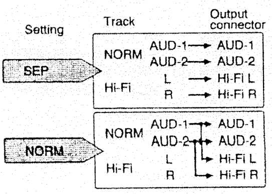
BR-S500U doesn't have MIC/AUDIO IN connectors.

Connection with a monitor

The audio signal output from the AUDIO MONITOR OUT connector is monaural. Select the signal to be output with the front panel AUDIO MONITOR switch (☞p.11).

Menu switch No.203 "AUDIO OUTPUT SELECT" setting

At the factory, the unit is preset to output Hi-Fi audio from Hi-Fi AUDIO OUT and normal audio from NORMAL AUDIO OUT. With Menu switch setting, normal audio can be output both from Hi-Fi AUDIO OUT and NORMAL AUDIO OUT. This is convenient when you want to output two channels of stereo normal audio signals. (☞p.30)

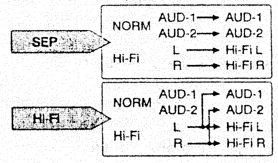

Setting
Track
Output connector
SEP
NORM
AUD-1
AUD-2
Hi-Fi
L
R
AUD-1
AUD-2
Hi-Fi L
Hi-Fi R
NORM
NORM
AUD-1
AUD-2
Hi-Fi
L
R
AUD-1
AUD-2
Hi-Fi L
Hi-Fi R

Menu switch No.204 "Hi-Fi OUT AT SEARCH" setting

With Menu switch setting, normal audio can be output during search or during plyaback of a tape with no Hi-Fi audio signals. (☞p.30)

Menu switch No.207 "AUDIO INPUT SELECT" setting (BR-S800U only)

At the factory, the unit is preset to record the signal input to Hi-Fi AUDIO IN on the Hi-Fi audio track and the signal input to NORMAL AUDIO IN on the normal audio track. With Menu switch setting, the signal input to Hi-Fi AUDIO IN can be recorded both on the Hi-Fi and normal audio tracks. This is convenient when you want to record the same signal on the Hi-Fi and normal audio tracks. (☞p.30).


Setting
Input connector
Track
SEP
NORM
AUD-1
AUD-2
Hi-Fi
L
R
AUD-1
AUD-2
Hi-Fi L
Hi-Fi R
Hi-Fi
NORM
AUD-1
AUD-2
Hi-Fi
L
R
AUD-1
AUD-2
Hi-Fi L
Hi-Fi R

Type of connectors

Front panel:

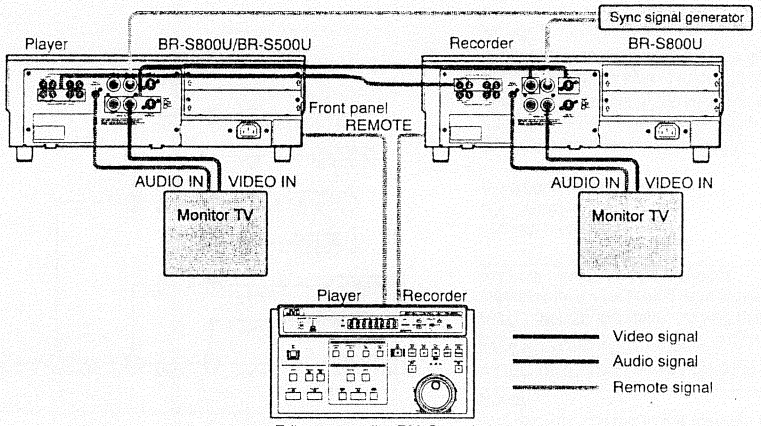
PHONES:	ø 3.5 mini-jack (stereo)
MIC:	ø 3.5 mini-jack (monaural)

Rear panel:

All connectors are RCA type.

3-3 EDITING

Connection example when using RM-G800U (optional).



Editing controller RM-G800U

This is a standard editing system in combination with the optional editing controller RM-G800U.

NOTE:

To connect the remote cable, be sure that the power of the VCR is turned off.

External sync signal

By inputting an external sync signal, you can ensure that the Recorder's picture remains stable even when special effects playback is engaged in the Player. Use a composite sync signal or a composite video signal for external sync.

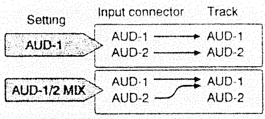
Extension remote cable (optional)

The RM-G800U's cable is about 85 cm long. If you want to extend the cable, use the optional VC-G8030U cable (3 m).

Menu switch No.205 "AUD-1 REC." setting (BR-S800U only)

The signals input to AUDIOIN NORM AUD-1 and AUD-2 can be mixed and be recorded on the audio-1 track. (☞p.29)

To permit later insertion of BGM or narration on the recorder's AUD-2 track, use this setting to mix the player's audio output (AUD-1 and AUD-2) and record both signals on the recorder's AUD-1 track.



3-3 EDITING

Editing system with other optional editing controllers

In addition to the RM-G800U, the following editing controllers can also be used in a BR-S800U/BR-S500U editing system. Depending on which controller you use, some optional boards and special settings may be necessary. See below.

With RM-86U:

- SA-K28UA 45-pin interface board.
- Set Menu switches No.330 "VIDEO EDIT DELAY" and No.331 "AUDIO EDIT DELAY" to "4 FRAMES". THe RM-86U's edit timing cannot be set to "-4 FRAMES". Set it to "-3 FRAMES". For setting procedures , consult your local JVC dealer.((☞p.32)
- Set Menu switches No.319 "TAPE MAX SPEED" and No.340 "SEARCH SPEED" to "X17". (☞p.32)
- CTL time code editing is not possible.
- Normal audio may overlap for a few frames after the edit-in point.

With RM-G810U:

- SA-K28UA 45-pin interface board.
- CTL time code editing is not possible.
- Set the RM-G810U's "EDIT TIMING ADJUSTMENT" to "–8 FRAMES". For setting procedures, consult your local JVC dealer.

With RM-G860U:

- SA-K28UA 45-pin interface board or SA-K26U 9-pin interface board.
- CTL time code editing is possible with the SA-K26U installed. (CTL time code setting is not possible.)
- Set the RM-G860U's "EDIT TIMING ADJUSTMENT" to "–8 FRAMES".

With RM-G870U:

- SA-K26U 9-pin interface board.
- CTL time code editing is possible.
- Set the RM-G870U's "EDIT TIMING ADJUSTMENT" to "–8 FRAMES".

When LTC/VITC (SMPTE) time code is required:

- SA-R50U time code reader/generator board. When installing the SA-R50U, the SA-K50U adapter board is necessary. When installing the SA-R50U by attaching it to the SA-K26U, the SA-K50U is not necessary.

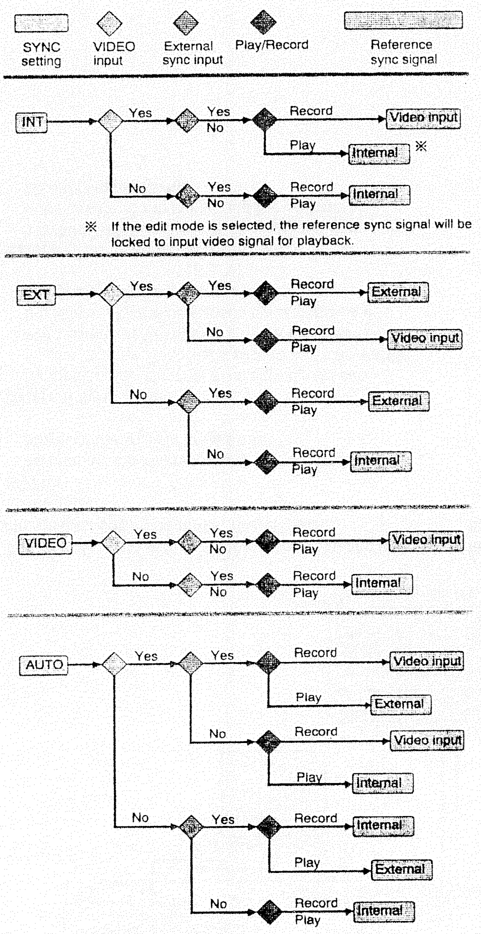
When connecting to a computer:

- SA-K27UA RS-232C interface board.
- Use "cross-type" RS-232C cable to connect the SA-K27UA with a computer.

Reference pages

Optional accessories p.52

3-4 REFERENCE SYNC SIGNALS SETTING


SYNC setting
VIDEO input
External sync input
Play/Record
Reference sync signal
INT
Yes
Yes
No
Record
Video input
Play
Internal ※
No
Yes
No
Record
Play
Internal
EXT
Yes
Yes
Record
Play
External
No
Record
Play
Video input
No
Yes
Record
Play
External
No
Record
Play
Internal
VIDEO
Yes
Yes
No
Record
Play
Video input
No
Yes
No
Record
Play
Internal
AUTO
Yes
Yes
Record
Video input
Play
External
No
Record
Video input
Play
Internal
No
Yes
Record
Internal
Play
External
No
Record
Play
Internal

※ If the edit mode is selected, the reference sync signal will be locked to input video signal for playback.

Reference sync signals for recording and playback

Sync signal:
A sync signal is essential for stable VCR tape running. Playback and recording are based on the sync signal.

Sync signal variation:
The BR-S800U/BR-S500U can use any of the following types of signal as a reference sync signal.

1. Sync signal generated by the VCR's internal sync signal generator.
2. Input video signal applied to the VIDEO IN connector.
3. External sync signal applied to the SYNC IN connector
4. Advanced sync signal from TBC applied to the SYNC IN connector.

Menu switch related to sync signal setting:
Reference sync signal can be set via Menu switch No.003 "SYNC SELECT". (☞p.28)

Settings

INTERNAL: Locked to the sync signal from the built-in sync signal generator for playback, and locked to the input video signal for recording.

EXTERNAL: Locked to the external sync signal.

VIDEO (BR-S800U only): Locked to the input video signal.

AUTO (BR-S800U only): Locked to the input video signal for recording, and locked to the external sync signal for playback.

Factory preset:
BR-S800U: "AUTO"
BR-S500U: "INTERNAL"

Sync signal selection structure:
If the sync signal selected via Menu switch above is not supplied, the VCR will choose another signal for sync depending on the situation. This is described in the flowchart at left.

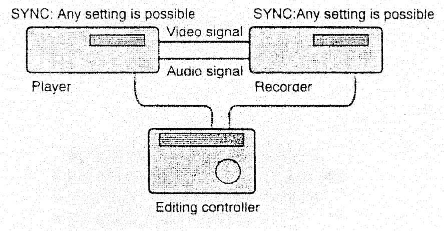
Reference pages
Menu switch setting p.25

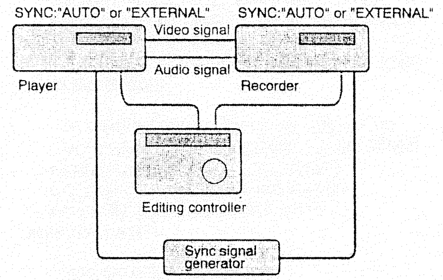
3-4 REFERENCE SYNC SIGNALS SETTING

Guide to reference sync signal setting:

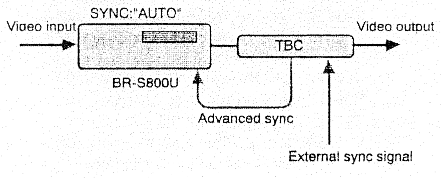
- **Editing system**
  - When external sync is not applied:
    Player: Any setting is possible.
    Recorder: Any setting is possible.

    NOTE: When special effects playback is engaged in the Player, the Recorder's picture may be distorted. This is not a malfunction. To prevent this, use external lock.


SYNC: Any setting is possible
SYNC:Any setting is possible
Video signal
Audio signal
Player
Recorder
Editing controller


SYNC:"AUTO" or "EXTERNAL"
SYNC:"AUTO" or "EXTERNAL"
Video signal
Audio signal
Player
Recorder
Editing controller
Sync signal generator

  - When external sync is applied:
    Player: "AUTO" or "EXTERNAL".
    Recorder: "AUTO" or "EXTERNAL".


SYNC:"AUTO"
Video input
Video output
TBC
BR-S800U
Advanced sync
External sync signal

- **Recording/transmission system using an external TBC**
  - BR-S800U:
    When using the BR-S800U for both recording and feeding purposes: "AUTO".
    When using the BR-S800U as a feeder only : "AUTO" or "EXTERNAL".
  - BR-S500U:
    "EXTERNAL".

NOTE: Set Menu switch No.001 "TBC CONNECT" to "ON". (☞p.30)

Reference pages
Menu switch setting p.25

4 MENU SWITCH SETTING

4-1 MENU SWITCH ORGANIZATION

Menu switches

In addition to the front panel switches, the BR-S800U/BR-S500U incorporate various On-Screen Menu switches which can be set referring to the monitor screen or counter display. The Menu switch setting data is stored in the VCR's internal memory and remains even after the power is turned off.

Menu switch hierarchy

Levels

Due to the variety and complexity of the setting items available via the Menu switches, the switches have been divided into two levels to simplify easier operation.

Menu switch-1: Switches initially available.
These are switches which may be used more frequently such as normal audio Audio Limiter ON/OFF, Dolby NR ON/OFF, etc.

Menu switch-2: Switches available when Menu switch-1 No.338 "MENU SW 2" is set to "OPEN".
These are switches which may be used less frequently than switch-1. At the factory, Menu switch No.338 "MENU SW 2" is preset to "CLOSE". Set it to "OPEN" to activate switch-2 settings.

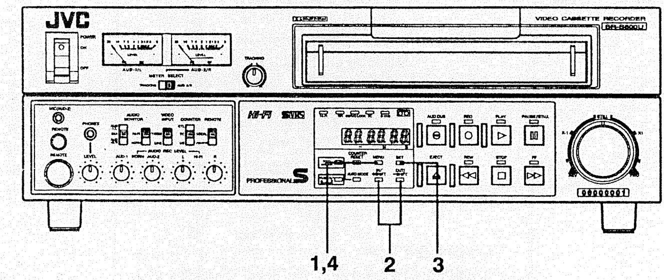
Category

The Menu switches in each level are separated into the following categories as shown at left.

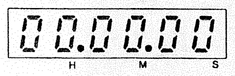
- **Servo**
  Menu switches No.000 — 004
- **Video**
  Menu switches No.100 — 101
- **Audio**
  Menu switches No.200 — 208
- **System**
  Menu switches No.300 — 351
- **On-screen**
  Menu switches No.500 — 504

4-2 SETTING PROCEDURE

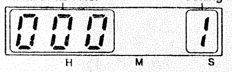
Illustration shows BR-S800U



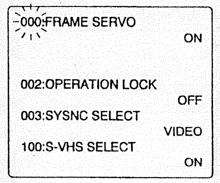
Counter display



Menu switch No. Setting



Monitor screen

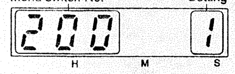


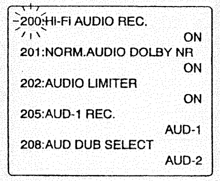
000:FRAME SERVO ON
002:OPERATION LOCK OFF
003:SYSNC SELECT VIDEO
100:S-VHS SELECT ON

Operation

1 Engage the Menu switch setting mode.
Press the MENU button.
→ Counter display and monitor screen change to the Menu switch setting mode.

Menu switch No. Setting

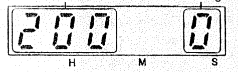


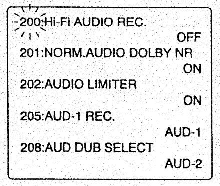


200:HI-FI AUDIO REC. ON
201:NORM.AUDIO DOLBY NR ON
202:AUDIO LIMITER ON
205:AUD-1 REC. AUD-1
208:AUD DUB SELECT AUD-2

2 Select the switch item to be set.
Press either the IN/+SHIFT or OUT/–SHIFT button to select desired item. The selected item will start blinking on the monitor screen.

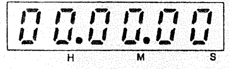
Menu switch No. Setting





200:HI-FI AUDIO REC. OFF
201:NORM.AUDIO DOLBY NR ON
202:AUDIO LIMITER ON
205:AUD-1 REC. AUD-1
208:AUD DUB SELECT AUD-2

3 Change the setting of the selected item.
Press the SET button to set data as desired.
If you want to set another item, repeat steps 2 to 3.



4 End Menu switch setting.
Press the MENU button. The Counter display returns to the tape counter and the Menu setting display goes off the screen.

Hour meter display:
Hour meter data can be displayed only on-screen with Menu switch No.909. It cannot be displayed on the counter.

☞ p.54 GLOSSARY: Hour meter

4-3 MENU SWITCH LIST

● SERVO		No.	On-screen Description	Explanation	Page
SW-1	✱	000	FRAME SERVO	Frame servo ON/OFF	28
		002	OPERATION LOCK	Mode lock ON/OFF	28
		003	SYNC SELECT	Reference sync signal selection	28
SW-2		001	TBC CONNECT	TBC ON/OFF (if connected)	30
		004	AUTO H. PHASE	Auto H-phase circuit ON/OFF	30

● VIDEO		No.	On-screen Description	Explanation	Page
SW-1	✱	100	S-VHS SELECT	S-VHS recording with an S-VHS tape ON/OFF	28
		101	EDIT SELECT	Recording/playback picture quality selection	28

● AUDIO		No.	On-screen Description	Explanation	Page
SW-1	✱	200	Hi-Fi AUDIO REC.	Hi-Fi audio recording ON/OFF	29
		201	NORM. AUDIO DOLBY NR	Dolby NR ON/OFF for normal audio	29
	✱	202	AUDIO LIMITER	Audio limiter ON/OFF for normal audio	29
	✱	205	AUD-1 REC.	Signal selection to be recorded on the audio-1 track	29
	✱	208	AUD DUB SELECT	Soundtrack selection for audio dubbing	29
SW-2		203	AUDIO OUTPUT SELECT	Selects the signal output from AUDIO OUT	30
		204	Hi-Fi OUT AT SEARCH	Selects the signal output from AUDIO OUT Hi-Fi during search	30
		206	AUD-2/LTC	Selects the signal to be recorded on the audio-2 track	30
	✱	207	AUDIO INPUT SELECT	Selects the signal to be recorded on the AUD-1/2 tracks	30

● SYSTEM		No.	On-screen Description	Explanation	Page
SW-1		338	MENU SW 2	For Menu switch-2 items setting	29
SW-2		300	DIRECT EJECT	Mode selection for Eject	31
		301	DIRECT SEARCH	Mode selection for Search	31
	✱	302	AUTO REC. PREROLL	Back space function ON/OFF in the Record-Pause mode	31
	✱	304	RECORDING INHIBIT	Inhibits recording on cassettes with safety tab	31
	✱	305	REPEAT REC.	Repeat recording ON/OFF	31
		312	MODE AT TAPE END	Mode selection when tape end is detected	31
		319	TAPE MAX SPEED	Maximum tape speed selection for rewind and fast-forward	32
	✱	330	VIDEO EDIT DELAY	Delay time selection for video signals at edit point in editing	32
	✱	331	AUDIO EDIT DELAY	Delay time selection for audio signals at edit point in editing	32
		337	SLOW MODE	Slow-motion mode selection	32
	✱	339	A.DUB ENABLE AT LTC	Audio dubbing on LTC-recorded audio-2 track	32
		340	SEARCH SPEED	Maximum search speed selection	32
		343	SUB WARNING INHIBIT	Mode selection when a malfunction occurs	32
		351	SYNCHRONIZATION	Capstan bump ON/OFF with the editing controller	33

● ON-SCREEN		No.	On-screen Description	Explanation	Page
SW-1		500	ON SCREEN DISPLAY	On-Screen ON/OFF	29
SW-2		504	INFORMATION	Available on-screen information selection	33

✱: Not available with BR-S500U.

4-3 MENU SWITCH LIST

A Quick Reference Chart Of Menu Switches

	Menu switch No.338 "MENU SW 2" is "CLOSE". (Initial setting)		Menu switch No.338 "MENU SW 2" is "OPEN".	
SERVO	000	FRAME SERVO	001	TBC CONNECT
	002	OPERATION LOCK	004	AUTO H. PHASE
	003	SYNC SELECT		
VIDEO	100	S-VHS SELECT		
	101	EDIT SELECT		
AUDIO	200	Hi-Fi AUDIO REC.	203	AUDIO OUTPUT SELECT
	201	NORM. AUDIO DOLBY NR	204	Hi-Fi OUT AT SEARCH
	202	AUDIO LIMITER	206	AUD-2/LTC
	205	AUD-1 REC.	207	AUDIO INPUT SELECT
	208	AUD DUB SELECT		
SYSTEM	338	MENU SW 2	300	DIRECT EJECT
			301	DIRECT SEARCH
			302	AUTO REC. PREROLL
			304	RECORDING INHIBIT
			305	REPEAT REC.
			312	MODE AT TAPE END
			319	TAPE MAX SPEED
			330	VIDEO EDIT DELAY
			331	AUDIO EDIT DELAY
			337	SLOW MODE
			339	A. DUB ENABLE AT LTC
			340	SEARCH SPEED
			343	SUB WARNING INHIBIT
			351	SYNCRONIZATION
ON-SCREEN	500	ON SCREEN DISPLAY	504	INFORMATION

The following Menu switches are available only with the BR-S800U and not with the BR-S500U.

No.000	FRAME SERVO*
No.100	S-VHS SELECT
No.200	Hi-Fi AUDIO REC.
No.202	AUDIO LIMITER
No.205	AUD-1 REC.
No.207	AUDIO INPUT SELECT
No.208	AUD DUB SELECT
No.302	AUTO REC. PREROLL
No.304	RECORDING INHIBIT
No.305	REPEAT REC.
No.330	VIDEO EDIT DELAY
No.331	AUDIO EDIT DELAY
No.339	A. DUB ENABLE AT LTC

*Frame servo is always "ON" with the BR-S500U.

4-4 MENU SWITCH-1 ITEMS

More frequently used switches are available with SWITCH-1.

SWITCH-1 SERVO

No.000 FRAME SERVO

Setting: OFF (0) .... Frame Servo OFF.
●ON (1) .... Frame Servo ON.

Content: Activates or defeats Frame Servo. Normally set to ON. If the servo is unstable when the following signals are used, set to OFF.
Not frame-controlled signals
Low video S/N signals after repeated dubbing.

No.002 OPERATION LOCK

Setting: ●OFF (0) .... Operate lock OFF.
ON (1) .... Operate lock ON.

Content: Activates or defeats mode lock function. Set to ON to lock the VCR in its current mode.
When set to ON: All buttons, switches, and controls are inoperative except menu setting buttons, the METER SELECT switch, PHONES LEVEL control, and the POWER switch.

The TRACKING control and the audio reacording level controls are rendered inoperative. Because the values for these controls are determined by the last-set position, any adjustment made to these controls while the unit is in the operation lock status will take effect the next time off and then on again.. If this happens, set the operation lock to "OFF" and adjust the controls as desired.

No.003 SYNC SELECT

Setting: INTERNAL (0) ...... Internal lock.
EXTERNAL (1) ..... External lock.
VIDEO (2) .... Input video signal
●AUTO (3) .... Auto switching

Content: Selects the reference sync signal for playback and recording.

INTERNAL: Locked to the internal sync signal.

EXTERNAL: Locked to the external sync signal.

VIDEO: Locked to the input video signal.

AUTO: Locked to the input video signal for recording. Locked to the advanced sync signal from TBC for playback. Use this setting when the unit is used as recorder and a TBC is connected.

For details, ☞p.22.

(For the BR-S500U, only INTERNAL and EXTERNAL are available. Factory preset is INTERNAL.)

SWITCH-1 VIDEO

No.100 S-VHS SELECT

Setting: VHS (0) ...... S-VHS recording OFF.
●AUTO (1) .... S-VHS recording ON.

Content: Selects the S-VHS/VHS recording mode when using an S-VHS tape. Set to VHS to record in the VHS mode with an S-VHS tape. When a VHS tape is used, the recording mode is VHS regardless of the setting.

No.101 EDIT SELECT

Setting: ● OFF(P.B.) (0)........ Playback with normal picture.
DUB or EDIT (1).... When used as Player or Recorder in dubbing or editing.
ENHANCED (2)..... Playback with sharper picture edges
CNR OFF (3)......... Deactivates the CNR circuit during playback.

Content: Selects the type of playback picture for playback or recording. Set to DUB or EDIT in dubbing or editing to reduce deterioration of picture quality.
•Set to "CNR OFF" when vertical color blur is noticeable.

●: Factory preset
( ): Display on the counter

☞ p.54 GLOSSARY: Frame servo, TBC, Advanced sync

4-4 MENU SWITCH-1 ITEMS

SWITCH-1 AUDIO

No.200 Hi-Fi AUDIO REC.

Setting: OFF (0) .... Hi-Fi audio recording OFF.
●ON (1) .... Hi-Fi audio recording ON.

Content: Activates or defeats Hi-Fi audio recording.

No.201 NORM. AUDIO DOLBY NR

Setting: OFF (0) .... Dolby NR OFF.
●ON (1) .... Dolby NR ON.

Content: Activates or defeats Dolby NR circuit for normal audio in recording and playback.

No.202 AUDIO LIMITER

Setting: OFF (0) .... Audio limiter OFF.
●ON (1) .... Audio limiter ON.

Content: Activates or defeats audio limiter for normal audio.

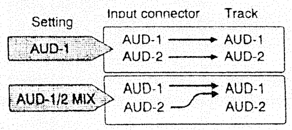
No.205 AUD-1 REC.

Setting: ●AUD-1 (0) .... Records audio-1 signals.
AUD-1/2 MIX (1) ... Records mixed audio signals.

Content: Selects audio signals to be recorded on the normal audio-1 track.

AUD-1: Audio signals input to AUD-1 are recorded.

AUD-1/2 MIX: Mixed audio signals input to AUD-1 and AUD-2 are recorded. No signal is recorded on the audio-2 track.



When set to "AUD-1/2 MIX", the microphone input signal is mixed with the signal input to the AUD-1 connector and recorded on the AUD-1 track.

No.208 AUD DUB SELECT

Setting: AUD-1 (0) ...... Records on the audio-1 track.
●AUD-2 (1) ...... Records on the audio-2 track.
AUD-1/2 (3) ... Records on both tracks.

Content: Selects the soundtrack for audio dubbing.

AUD-1: The signal is recorded on the audio-1 track.

AUD-2: The signal is recorded on the audio-2 track.

AUD-1/2: The signal is recorded both on the audio-1 and audio-2 tracks.

To dub a microphone input signal on the AUD-1 track, set this switch to "AUD-1" and set the menu switch No.205 "AUD-1 REC" to "AUD-1/2 MIX".

SWITCH-1 SYSTEM

No.338 MENU SW 2

Setting: ●CLOSE (0) .. Menu switch-2 not available.
OPEN (1) .... Menu switch-2 available.

Content: Activates or defeats Menu switch-2 items.

CLOSE: Only Menu switch-1 items are available.

OPEN: Both Menu switch-1 and Menu switch-2 items can be set.

SWITCH-1 ON-SCREEN

No.500 ON SCREEN DISPLAY

Setting: OFF (0) .... On-Screen display OFF.
●ON (1) .... On-Screen display ON.

Content: Activates or defeats On-Screen display via VIDEO OUT MONITOR. On-Screen display is not available via VIDEO OUT LINE or Y/C.

☞ p.54 GLOSSARY: Dolby NR, Audio limiter

4-5 MENU SWITCH-2 ITEMS

SWITCH-2 SERVO

No.001 TBC CONNECT

Setting: ●OFF (0) .... When TBC is not connected.
ON (1) .... When TBC is connected.
Content: Set to ON when an external TBC is connected.

No.004 AUTO H. PHASE

Setting: OFF (0) .... Auto H-Phase OFF.
●ON (1) .... Auto H-Phase ON.
Content: Activates or defeats Auto H-Phase (automatic horizontal phase lock) circuit. Normally set to ON to reduce picture distortion at the edit point. When executing frame-unit editing repeatedly, set to OFF.

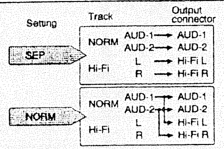
SWITCH-2 AUDIO

No.203 AUDIO OUTPUT SELECT

Setting: ●SEP (0) .... Outputs as labeled.
NORM (2) ... Outputs only normal audio signals.
Content: Selects signals output via rear panel AUDIO OUT connectors.

SEP: To output as labeled: normal audio from AUD-1/AUD-2, Hi-Fi audio from Hi-Fi L/R.

NORM: To output normal audio from all connectors: Hi-Fi L outputs normal audio-1 signal and Hi-Fi R outputs normal audio-2 signal.



No.204 Hi-Fi OUT AT SEARCH

Setting: ●MUTE (0) .... Outputs muted Hi-Fi audio.
NORM (1) ... Outputs normal audio.
Content: Selects output signals between muted Hi-Fi audio and normal audio via rear panel Hi-Fi AUDIO OUT connectors during search or during playback of a tape with no Hi-Fi audio signals.

No.206 AUD-2/LTC

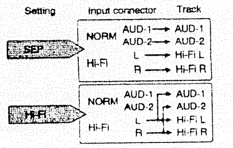
Setting: ●AUD-2 (0) ... Records the audio signal.
LTC (1) .... Records LTC signal.
Content: Selects usage of the audio-2 track either for audio signal recording or for LTC signal recording. When set to "LTC", no audio signal is output from the NORM AUD-2 connector.
Be sure that the VCR is in the Stop mode when switching between AUD-2 and LTC.

No.207 AUDIO INPUT SELECT

Setting: ●SEP (0) .... Records each signal independently.
Hi-Fi (1) ...... Records Hi-Fi audio on all tracks.
Content: Selects input signal to be recorded.

SEP: To record each signal on corresponding track: normal audio on AUD-1/AUD-2, Hi-Fi audio on Hi-Fi L/R.

Hi-Fi: To record Hi-Fi audio on all tracks: audio-1 signal is recorded on Hi-Fi L track and audio-2 signal is recorded on Hi-Fi R track.



●: Factory preset
( ): Display on the counter

☞ p.54 GLOSSARY: Auto H-phase, LTC

4-4 MENU SWITCH-1 ITEMS

SWITCH-2 SYSTEM

No.300 DIRECT EJECT

Setting: DISABLE (0) ... Only possible in the Stop mode.
●ENABLE (1) .... Possible in any mode.
Content: Selects modes in which the cassette can be ejected.

DISABLE: Ejection only possible in the Stop mode.

ENABLE: Ejection possible in any mode.

No.301 DIRECT SEARCH

Setting: DISABLE (0) ... Possible in the Still modes.
●ENABLE (1) .... Possible in various modes.
Content: Selects modes to accept dial search.

DISABLE: Dial search is possible in the Still mode.

ENABLE: Dial search is possible in the Still, Play, Stop, REW, and FF modes.

No.302 AUTO REC. PREROLL

Setting: DISABLE (0) .... No preroll operation.
●ENABLE (1) ..... Preroll operation.
Content: Activates or defeats back space editing.

DISABLE: Starts recording without prerolling in the Record-Pause or Audio Dub-Pause mode. Picture will be distorted at record-start point.

ENABLE: Starts recording with preroll in the Record-Pause or Audio Dub-Pause mode. Picture won't be distorted.

No.304 RECORDING INHIBIT

Setting: ●OFF (0) .... Normal recording is possible
ON (1) .... Recording is not possible.
Content: OFF: Recording is possible with cassettes with safety tab in place.

ON: Recording is not possible whether there is a safety tab or not. If the VCR is used only as a player, set to ON to prevent misoperation.

No.305 REPEAT REC.

Setting: ●DISABLE (0) .... No repeat recording.
ENABLE (1) ..... Engages repeat recording.
Content: Activates or defeats repeat recording.

DISABLE: No repeat recording. The VCR stops recording at tape end. Normally set to this position.

ENABLE: Activates repeat recording. The VCR stops recording at tape end, then rewinds and starts recording again from the beginning of the tape.

No.312 MODE AT TAPE END

Setting: ●S.REW (0) .. Stops at tape end.
REW (1) ..... Stops at tape begin after Rewind.
Content: Selects the mode entered when the end of the tape is detected.

S.REW: Rewinds the leader section and enters the Stop mode.

REW: Rewinds to the beginning of tape and enters the Stop mode.

No.319 TAPE MAX SPEED

Setting: ●X100 (0) ..... 100X normal speed.
X33 (1) .... 33X normal speed.
X17 (2) .... 17X normal speed.
Content: Selects the maximum tape speed during Rewind and Fast-forward.

X100: Maximum speed is 100X. The remote control counter (optional) does not run if it is connected via 45-pin.

X33: Maximum speed is 33X. The remote control counter (optional) does not run if it is connected via 45-pin.

X17: Maximum speed is 17X.

Search is always executed at maximum 11 times normal speed with S-VHS-C or VHS-C cassette tape.

4-5 MENU SWITCH-2 ITEMS

No.330 VIDEO EDIT DELAY

Setting: ●8 FRAMES (0) ...... Delays 8 frames.
4 FRAMES (1) ...... Delays 4 frames.
Content: Selects the length of time before video recording starts at the edit point in editing. Normally set to "8 FRAMES". Set to "4 FRAMES" when the VCR is controlled via the RM-86U remote control.

No.331 AUDIO EDIT DELAY

Setting: ●8 FRAMES (0) ...... Delays 8 frames.
4 FRAMES (1) ...... Delays 4 frames.
Content: Selects the length of time before video recording starts at the edit point in editing. Normally set to "8 FRAMES". Set to "4 FRAMES" when the VCR is controlled via the RM-86U remote control.

No.337 SLOW MODE

Setting: LINEAR (0) .... Linear slow.
●STEP (1) .... Step slow.
Content: Selects slow-motion playback mode.

LINEAR: Noise bars appear during slow. Normal audio is output during slow. This setting is recommended for editing.

STEP: Noise bars don't appear during slow. No audio is output during slow.

No.339 A. DUB ENABLE AT LTC

Setting: ●DISABLE (0) .... Dubbing is not possible.
ENABLE (1) ..... Dubbing is possible.
Content: Activates or defeats audio dubbing on the audio-2 track with LTC signals.

DISABLE: Audio dubbing is not possible if LTC signals have been recorded on the audio-2 track.

ENABLE: Audio dubbing is possible even though LTC signals have been recorded on the audio-2 track.

When set to "ENABLE" and audio dubbing is executed, prerecorded LTC signals are erased. If you don't want this, set Menu switch No.208 "AUD DUB SELECT" to "AUD-1" to execute audio dubbing on the audio-1 track.

No.340 SEARCH SPEED

Setting: ●X33 (0) .... +/– 33X search.
X17 (1) .... +/– 17X search.
Content: Selects the maximum search speed.

X33: Maximum search speed is +/– 33 times normal when the search dial is turned fully clockwise or counterclockwise. The remote control counter (optional) does not run if it is connected via 45-pin.

X17: Maximum search speed is +/– 17 times normal when the search dial is turned fully clockwise or counterclockwise.

Search is always executed at maximum 11 times normal speed with S-VHS-C or VHS-C cassette tape.

No.343 SUB WARNING INHIBIT

Setting: ●OFF (0) .... Enters the Warning mode.
ON (1) .... Enters the Stop or Eject.
Content: Selects the mode entered when a malfunction is detected.

OFF: When a malfunction occurs, the VCR enters the Warning mode and displays a warning code on the counter and the monitor screen. See p.48 for warning codes.

ON: When a malfunction occurs, the VCR either stops or ejects the cassette depending on the nature of the problem. (☞p.48) Warning codes are not available with this setting. For safe operation, do not use this setting unnecessarily.

●: Factory preset
( ): Display on the counter

4-4 MENU SWITCH-1 ITEMS

SWITCH-2 SYSTEM

No.351 SYNCHRONIZATION

Setting: DISABLE (0) .... Rejects Capstan bump.
●ENABLE (1) ..... Accepts Capstan bump.
Content: Accepts or rejects Capstan bump command from the editing controller.

DISABLE: Capstan bump is rejected in editing.

ENABLE: Capstan bump is accepted in editing. Increases editing accuracy.

SWITCH-2 ON-SCREEN

No.504 INFORMATION

Setting: TIME (0) .... Displays time counter.
●TIME+MODE (1) .. Displays time and mode.
Content: Selects the on-screen information to be displayed.

TIME: Time counter data is displayed.

TIME+MODE: Time counter data, operation mode, and search speed are displayed.

●: Factory preset
( ): Display on the counter

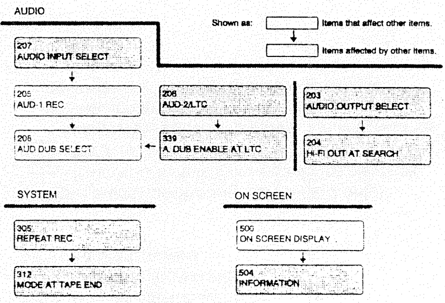
4-6 RELATIONSHIP BETWEEN MENU SWITCHES

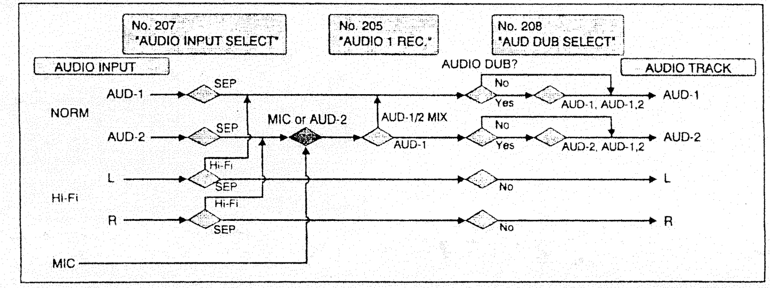
Relationship

Some Menu switches may affect the action of other Menu switches, depending on the settings. The relationship between switches is shown in the chart at right. When setting of a Menu switch does not work as expected, check to see if that setting is affected by other items.

Input audio signal flowchart

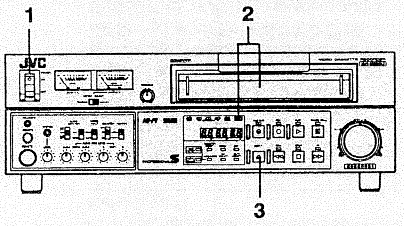
The flowchart below describes how each audio input connector functions and shows how Menu switch settings determine on which track the input signal is recorded. A microphone input signal is normally recorded on the AUD-2 track. By setting Menu switch No.205 "AUD-1 REC" to "AUD-1/2 MIX", the MIC input signal can be recorded on the AUD-1 track together with the signal input to the AUD-1 connector.


AUDIO
Shown as:
Items that affect other items.
Items affected by other items.
207 AUDIO INPUT SELECT
205 AUD-1 REC
206 AUD DUB SELECT
208 AUD-2/LTC
339 A. DUB ENABLE AT LTC
203 AUDIO OUTPUT SELECT
204 HI-FI OUT AT SEARCH
SYSTEM
305 REPEAT REC
312 MODE AT TAPE END
ON SCREEN
500 ON SCREEN DISPLAY
504 INFORMATION


No. 207 "AUDIO INPUT SELECT"
No. 205 "AUDIO 1 REC."
No. 208 "AUD DUB SELECT"
AUDIO INPUT
AUDIO DUB?
AUDIO TRACK
NORM
AUD-1
AUD-2
SEP
MIC or AUD-2
AUD-1/2 MIX
AUD-1
No
Yes
AUD-1, AUD-1,2
AUD-2, AUD-1,2
Hi-Fi
L
R
MIC
AUD-1
AUD-2
L
R

5 LOADING/UNLOADING

LOADING AND UNLOADING



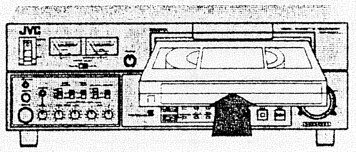
Procedure

1 Turn the power on.

POWER ON OFF Set the POWER switch to ON.

2 Insert a cassette.

Insert the cassette into the cassette loading slot by gently pushing the center of the cassette's label side.



→ The cassette is automatically retracted and loaded.

→ The VCR enters the Stop mode and the "Cassette loaded indicator" ▭ lights.

3 Remove a cassette.

⏏ Press the EJECT button.

→ The cassette is automatically ejected.

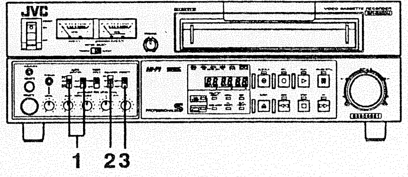
→ Remove the cassette from the cassette loading slot.

WARNING

- Do not insert fingers or foreign objects into the cassette loading slot. You may hurt yourself or damage the mechanism.
- Do not try to remove the cassette once automatic loading has started.

6 PLAYBACK

6-1 PREPARATION



Front panel switch setting

1 Set the AUDIO MONITOR select switches as required. (☞p.11)

AUDIO MONITOR AUD-1/L MIX AUD-2/R HI-FI NORM

2 Set the COUNTER switch as required. (☞p.12)

COUNTER CTL TC UB

3 Set the REMOTE switch as required. (☞p.12)

REMOTE LOCAL REMOTE

Menu switch setting

Set the following items as required.

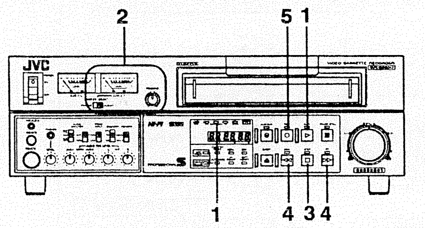
Select reference sync signal:
No.003 "SYNC SELECT" (☞p.28)
Factory preset: "AUTO" (BR-S800U)
"INTERNAL" (BR-S500U)

Select the type of picture:
No.101 "EDIT SELECT" (☞p.28)
Factory preset: "OFF"

Select TBC mode.
No.002 "TBC CONNECT" (☞p.30)
Factory preset: "OFF"
Set to "ON" when an external TBC is connected.

☞ p.54 GLOSSARY: TBC

6-2 BASIC PROCEDURE



Operation

1 Play back a tape.

▷ Press the PLAY button.
→ Starts playback.

SERVO LOCK → The SERVO LOCK indicator lights.

2 Adjust the tracking.

METER SELECT TRACKING AUD-2/R Turn the TRACKING control until the tracking meter (AUD-2/R) deflects fully to the right. Make sure that no noise bar appears on the monitor screen. If there is noise on the Hi-Fi audio track, turn the control until the noise is minimized.

AUD-2/R TRACKING

- Even if the TRACKING control is set to the center position, there may be some noise during playback of an EP-recorded tape. In this case, adjust the control as necessary to minimize the noise.

3 Stop playback.

□ Press the STOP button.
→ Playback stops.

4 Rewind or fast-forward the tape.

▷▷ Press the FF button.
→ Starts fast-forward.

◁◁ Press the REW button.
→ Starts rewind.

5 Input signal monitoring. (BR-S800U only)

○ If the REC button is pressed during playback, the input signal can be monitored on screen as long as the button is pressed. Do not press the REC button while pressing the PLAY button, otherwise the VCR enters the Record mode.

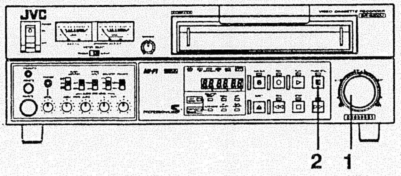
Maximum REW/FF speed

Factory preset: 100X normal speed.
→ Other settings (33X, 17X) are possible via Menu switch. (No.319 "TAPE MAX SPEED", ☞p.32)

VCR mode at tape end

Factory preset: Enters the Stop mode at tape end.
→ This is selectable via Menu switch; the VCR automatically rewinds when the end of the tape is reached and then stops. (No.312 "MODE AT TAPE END" ☞p.31)

6-3 SPECIAL EFFECTS PLAYBACK



Operation

1 Dial search
Turn the dial while in the Play, Still, Stop, FF, or REW mode. Turn the dial clockwise to search in the forward direction and turn it counterclockwise to search in the reverse direction.
→ Starts search. Search speed varies as shown below (in the Step Slow mode).

FWD direction (clockwise) →
1/30 ⇄ 1/18 ⇄ 1/6 ⇄ 1 ⇄ 2 ⇄ 5 ⇄ 11 ⇄ 33*
Center(STILL) 0
-1/30 ⇄ -1/18 ⇄ -1/6 ⇄ -1 ⇄ -2 ⇄ -5 ⇄ -11 ⇄ -33*
Click position
REV direction (counterclockwise) →

To end search: Press either of the PLAY, STOP, FF, REW button.
→ The VCR enters the mode corresponding to the button pressed. The dial remains in the same position.

To re-start search: Turn the dial again.

Maximum search speed
The factory preset maximum search speed is 33X. This can be changed to 16X via Menu switch No.340 "SEARCH SPEED". Set to "X17" to output CTL signals during search for readout on an optional 45-pin controller. (☞p.32)

DIRECT SEARCH setting
At the factory, Menu switch No.301 "DIRECT SEARCH" is preset to "ENABLE. When it is set to "DISABLE", the Search mode can be entered only from the Play and Still modes. (☞p.31)

2 Still/Frame advance
Press the PAUSE/STILL button in the Play mode.
→ Displays a still picture.

Press the PAUSE/STILL button again.
→ Advances the picture one frame at a time.

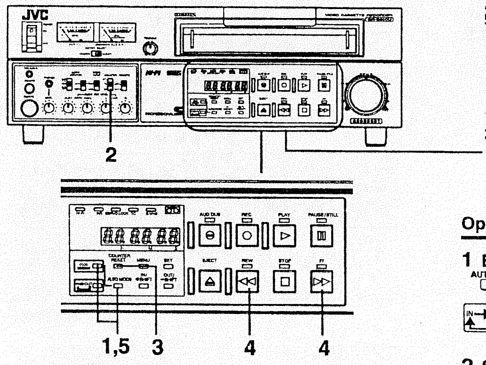
To resume normal playback: Press the PLAY button.

Slow motion mode setting
Menu switch No.337 "SLOW MODE"
Setting: "STEP" or "LINEAR"
Factory preset: "STEP"
The mode setting for slow-motion playback.
The factory preset is set to "STEP" for noiseless slow motion. (☞p.32)

During Slow/Still
The TRACKING control functions for tracking adjustment during step slow motion playback, and for V.LOCK adjustment of a still picture.
The TRACKING control has no effect when Menu switch No.337 "SLOW MODE" is set to "LINEAR".

Long Pause function
The Long Pause mode is automatically engaged for tape protection when the Still mode continues for more than 5 minutes.
Long Pause function: The VCR enters the Stop mode. Tape tension is loosened and the drum stops.
To cancel this status: Press any button. The VCR enters the mode corresponding the button pressed.

6-4 COUNTER SEARCH



Operation

1 Engage the Counter Search mode.
Press the AUTO MODE button to light the Counter Search indicator.

2 Select the counter mode.
Set the COUNTER select switch to "CTL".

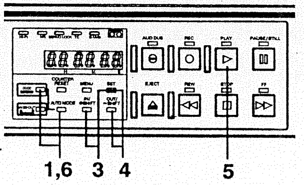
3 Designate the position you wish to locate later.
Press the COUNTER RESET button at the position you wish to locate later.
→ The counter resets to "00:00:00".

4 Start Counter Search.
Press the FF or REW button while in the Stop mode.
→ Tape will be rewound or fast-forwarded and stop at counter "00:00:00" position.

5 To cancel the Counter Search mode.
Press the AUTO MODE button. The Counter Search indicator goes off.

When the RM-G800U is connected, counter search and repeat playback are not possible.

6-5 REPEAT PLAYBACK



Operation

1 Engage the Repeat mode.
Press the AUTO MODE button to light the Repeat mode indicator.

2 Select the counter mode.
Set the COUNTER select switch to "CTL" or "TC".

3 Enter the repeat-start point.
Press the SET button while pressing the IN/+SHIFT button where you want Repeat playback to start.
→ Start point is entered. When no start point is entered, repeat playback will start from the beginning of the tape.

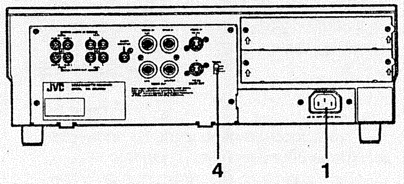
4 Enter the repeat-end point.
Press the SET button while pressing the OUT/–SHIFT button at the point where you want Repeat playback to end.
→ End point is entered. When no end point is entered, repeat playback will end at the end of the tape.

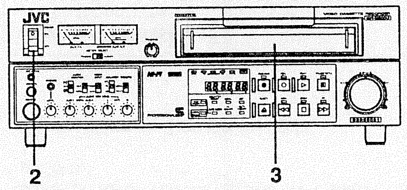
5 Start repeat playback.
Press the PLAY button.
→ Repeat playback starts between entered start and end points. Press the STOP button to stop repeat playback.

6 To cancel the Repeat mode.
Press the AUTO MODE button. The Repeat mode indicator turns off.

Repeat playback
The repeat playback start or end point is displayed on the counter for as long as the IN/+SHIFT or OUT/–SHIFT button is pressed. If the COUNTER RESET button is pressed while pressing the IN/+SHIFT or OUT/–SHIFT button, the preset repeat start or end point will be reset.

6-6 EXTERNAL TIMER PLAYBACK

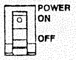




Operation

1 Connect an external timer unit.
Connect it to the AC IN socket. Turn on the external timer.

2 Turns the power on.



Set the POWER switch to ON.

3 Load a cassette.
Insert the cassette into the cassette loading slot.

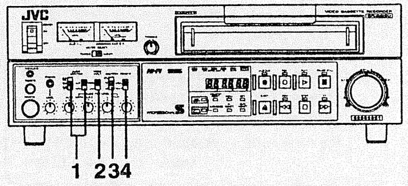
4 Engage the timer playback mode.

TIMER
REC
OFF
PLAY

Set the TIMER switch to "PLAY".
→ The VCR will automatically start playback when power is supplied from the external timer at the preset time. (The external timer must have been turned off first.)

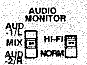
7 RECORDING

7-1 PREPARATION



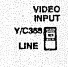
Front panel switch setting

1 AUDIO MONITOR select switches



Set the AUDIO MONITOR select switches as required. (☞p.11)

2 VIDEO INPUT select switch



Select the input video signal to be recorded with the VIDEO INPUT switch. (☞p.11)

3 COUNTER select switch

COUNTER
CTL
TC
UB

Set the COUNTER switch as required. (☞p.12)

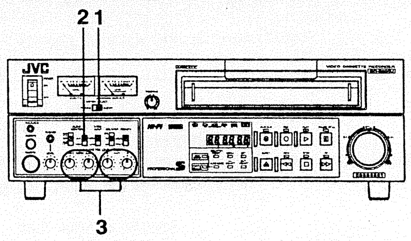
4 REMOTE switch

REMOTE
LOCAL
REMOTE

Set the REMOTE switch as required. (☞p.12)

For BR-S500U users
Section 7 describes recording and editing with the BR-S800U. As the BR-S500U is a player, you can skip these sections and go to section 9, p.48.

7-1 PREPARATION



Menu switch setting

Set the following items as required.

●SERVO

Frame Servo setting:
No.000 "FRAME SERVO" p.28
Factory preset: "ON"

Auto H-Phase setting:
No.004 "AUTO H. PHASE" p.30
Factory preset: ON

Reference sync signal setting:
No.003 "SYNC SELECT" p.28
Factory preset: "AUTO"

●VIDEO

VHS recording with S-VHS tapes:
No.100 "S-VHS SELECT" p.28
Factory preset: "AUTO"

The type of picture:
No.101 "EDIT SELECT" p.28
Factory preset: "OFF".

●AUDIO

Hi-Fi audio recording:
No.200 "Hi-Fi AUDIO REC" p.29
Factory preset: "ON"

Dolby NR for normal audio:
No.201 "NORM. AUDIO DOLBY NR" p.29
Factory preset: "ON"

Audio limiter for normal audio:
No.202 "AUDIO LIMITER" p.29
Factory preset: "ON"

Mixed audio recording on audio-1 track:
No.205 "AUD-1 REC." p.29
Factory preset: "AUD-1"

Hi-Fi audio recording on normal audio tracks:
No.207 "AUDIO INPUT SELECT" p.30
Factory preset: "SEP"

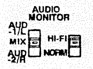
Audio recording level adjustment

1 Switch the AUD-2/R meter for level indication.

METER SELECT
TRACKING
AUD-2/R

Set the METER SELECT switch to "AUD-2/R".

2 Select indication mode.



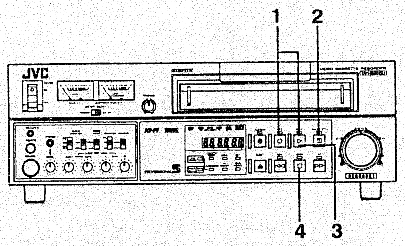
Set the AUDIO MONITOR switch to "Hi-Fi".
→ Hi-Fi audio level is displayed.
Set the AUDIO MONITOR switch to "NORMAL"
→ Normal audio level is displayed.

3 Adjust the level.
Adjust the audio level with the AUDIO REC LEVEL control corresponding to the signal selected with the AUDIO MONITOR switch.
→ Turn the control until the meters deflect to "0" at peak signal level.

When engaging the Record mode directly from the Play mode, set Menu switch No.003 "SYNC SELECT" to "VIDEO". This can help reduce picture distortion at the record-start point.

☞ p.54 GLOSSARY: Frame servo, Auto H-phase, Dolby NR, Audio limiter

7-2 BASIC PROCEDURE



Operation

1 Start recording

○ Press the PLAY button while pressing the REC button.

▷ → Both the REC and PLAY indicators light and recording will start.

2 Temporarily stop recording.

⏸ Press the PAUSE/STILL button.
→ The PAUSE/STILL indicator lights and recording is paused.

3 Re-start recording.

▷ Press the PLAY button.
→ The PAUSE/STILL indicator turns off and recording is re-started.

Auto Back Space Editing

Auto back space editing function: This function helps prevent picture distortion at edit points in recording.
System: When the PAUSE/STILL button is pressed during recording, the tape rewinds by about 3 seconds and stops in the Record-Pause mode. When recording is re-started by pressing the PLAY button, recording does not take place for about 3 seconds (the input signal is output to the monitor and the operation mode display on the monitor screen blinks for this period.) and re-starts at the position where the PAUSE/STILL button was pressed. The operation mode display on the monitor screen stops blinking.
Setting: Menu switch No.302 "AUTO REC. PREROLL" (☞p.31)
Factory preset: "ON"
When set to "OFF", response time for mode switching (Record—Record-Pause—Record) will be faster, however picture will be distorted at edit points.

4 Stop recording.

□ Press the STOP button.
→ The REC and PLAY indicators turn off and recording will stop.

CTL time code recording

- CTL time code is automatically recorded on the CTL track whenever recording is executed immediately after the tape has been rewound to the begenning.
- In this case, the time code is recorded from the value "00H 00M 00S" and the user bits are recorded as "00 00".
- If recording is stopped or paused, CTL time code recording will not restart when recording is restarted.

VHS recording with an S-VHS tape

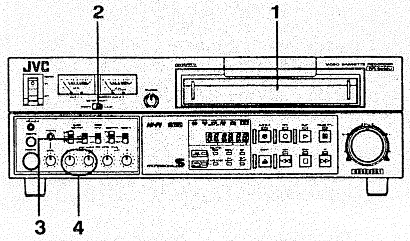
Set Menu switch No.100 "S-VHS SELECT" to "VHS". (☞p.28)

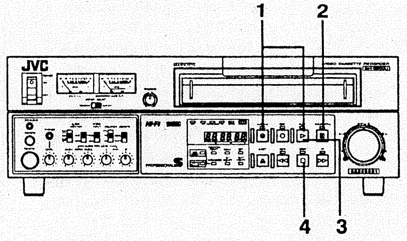
Long Pause function

To protect the tape, the Long Pause function is automatically engaged when the Record-Pause mode continues for more than 5 minutes.
Long Pause function: The VCR enters the Stop mode. Tape tension is loosened and the drum stops. The operation mode display on the monitor screen changes to "STBY-OFF".
To cancel this status: Press any button. The VCR enters the mode corresponding to the button pressed.

If PLAY is pressed during recording:
Recording is canceled and playback starts.

7-3 AUDIO DUBBING





Preparation

Menu switch setting

Soundtrack selection: (☞p.29)

Menu switch No.208 "AUD DUB SELECT"
Factory preset: "AUD-2"

Audio dubbing is possible on either the audio-1 track or both audio-1 and audio-2 tracks.

When dubbing on audio-2 track, set Menu switch No.206 "LTC SELECT" to "AUD-2" (factory preset).

1 Load a cassette.

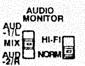
Insert a cassette with safety tab in place into the cassette loading slot.

2 Switch the AUD-2/R meter for level indication.

METER SELECT
TRACKING
AUD-2/R

Set the METER SELECT switch to "AUD-2/R".

3 Select indication mode for normal audio.



Set the AUDIO MONITOR switch to "NORMAL".

4 Adjust the level.

Adjust the audio level with NORMAL AUDIO LEVEL NORM control.
→ Turn the control until the meters deflect to "0" at peak signal level.

Procedure

1 Engage audio dubbing.

⊖ Press the PLAY button while pressing the AUD DUB button in the Play or Still mode.

▷ → Both the AUD DUB and PLAY indicators light and audio dubbing starts.

2 Temporarily stop audio dubbing.

⏸ Press the PAUSE/STILL button.
→ The PAUSE/STILL indicator lights and audio dubbing is paused.

3 Re-start audio dubbing.

▷ Press the PLAY button.
→ The PAUSE/STILL indicator turns off and audio dubbing is re-started.
Some noise bars may appear in the still picture or the picture may roll up and down at this time. This increases switching precision and is not a malfunction.

4 Stop audio dubbing.

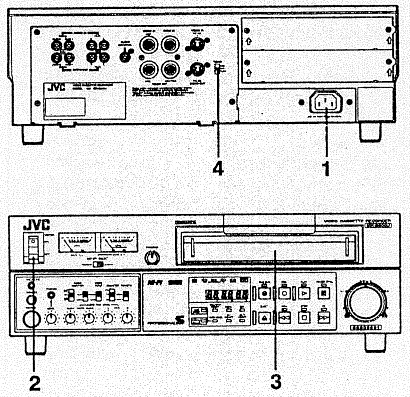
□ Press the STOP button.
→ The AUD DUB and PLAY indicators turn off and tape stops.

Auto Back Space Editing Function

As with the Record mode, this function is also available in the Audio Dubbing mode.
Setting: Menu switch No.302 "AUTO REC. PREROLL" (☞p.31)
Factory preset: "ON"
When set to "OFF", response time for mode switching (Record—Record-Pause—Record) will be faster, however sound will be distorted at edit points.

If PLAY is pressed during audio dubbing:
Audio dubbing is canceled and playback starts.

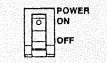
7-4 EXTERNAL TIMER RECORDING



Operation

1 Connect an external timer.
Connect it to the AC IN socket. Turn on the external timer.

2 Turn the power on.



Set the POWER switch to ON.

3 Load a cassette.
Insert a cassette with safety tab in place into the cassette loading slot.

4 Engages the timer recording mode.

TIMER
REC
OFF
PLAY

- Set the TIMER switch to "REC". (Leave the VCR in the Stop mode. Do not press any other button such as PLAY or REC.)
- Make necessary settings on the external timer.

→ The VCR will automatically start recording when power is supplied from the external timer at the preset time. (The external timer must have been turned off first.)

7-5 REPEAT RECORDING

Operation

1 Engage the Repeat mode.
Set Menu switch No.305 "REPEAT REC." to "ENABLE". (☞p.31)

2 Start repeat recording.
Start recording referring to the procedure described in the "RECORDING — BASIC PROCEDURE". (☞p.40)
→ Repeat recording starts.
→ The VCR will automatically rewind the tape at the tape end start recording again from the beginning of the tape.

8 EDITING WITH RM-G800U (option)

8-1 EDITING CONTROLLER

In combination with an optional editing controller, the BR-S800U can be used in an automatic video/audio editing system. Connectable controllers are listed below.

Editing controller RM-G800U

This controller is designed exclusively for the BR-S800U.

- One player and one recorder can be connected.
- CTL time code setting is possible.
- Can be connected to the BR-S800U without any interface board.

Editing controller RM-G860U

This controller is designed for use with most professional VCRs.

- Two players and one recorder can be connected.
- CTL time code setting is not possible.
- To connect to the BR-S800U, the optional SA-K26U RS-422 interface board or the optional SA-K28UA 45-pin interface board is necessary.

Editing controller RM-G870U

This controller is designed for use with most professional VCRs.

- Can store data for up to 127 edit events.
- Two players and one recorder can be connected.
- CTL time code setting is possible.
- To connect to the BR-S800U, the optional SA-K26U RS-422 interface board is necessary.

Editing controller RM-G810U/RM-G86U

This controller is designed for use with most professional VCRs.

- One player and one recorder can be connected.
- CTL time code setting is not possible.
- To connect to the BR-S800U, the optional SA-K28UA 45-pin interface board is necessary.

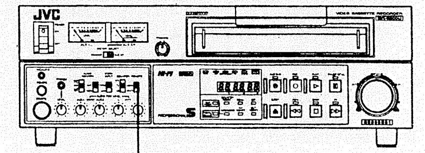
This manual explains editing procedures using the RM-G800U. For procedures using other controllers, refer to the instructions supplied with the controller.

Editing System
To configure an editing system, it is necessary to have a playback VCR (such as the BR-S500U), a recording VCR (such as BR-S800U), and an editing controller.

8-2 PREPARATION

1 Connect necessary components correctly.
(See "CONNECTIONS" ☞p.20)

2 Make necessary settings on connected units.



REMOTE switch

- For Player VCR (BR-S800U or BR-S500U)

REMOTE
LOCAL
REMOTE

Set the REMOTE switch to REMOTE.
→ See p.34 for other settings.

- For Recorder VCR (BR-S800U)

REMOTE
LOCAL
REMOTE

Set the REMOTE switch to REMOTE.
→ See p.38 for other settings.

- For RM-G800U

Set menu settings as desired while referring to the monitor (connected to the recorder VCR's VIDEO OUT MONITOR connector). Refer to the RM-G800U's instruction manual for details.

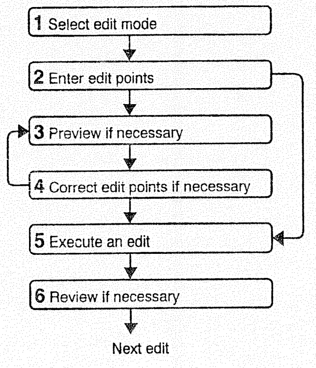
Slow motion mode setting
Menu switch No.337 "SLOW MODE"
Setting: "STEP" or "LINEAR"
Factory preset: "STEP"
The mode setting for slow-motion playback. The factory preset is set to "STEP" for noiseless slow motion. For editing, we recommend that you set the slow-motion mode to "LINEAR" for the following reasons.
1: Though noise appears during slow-motion playback, it is easier to identify the transition point of frames.
2: Normal audio can be output during slow-motion playback. (☞p.32)

☞ p.54 GLOSSARY: CTL time code

8-3 PROCEDURE

Operating flowchart

Editing procedures can be summarized as follows:



1 Select edit mode
Select either assemble editing or insert editing

2 Enter edit points
Enter both edit-in and -out points.

3 Preview if necessary
Perform "rehearsal" editing to confirm that the entered edit-in and -out points are appropriate. This is referred to as "Preview".

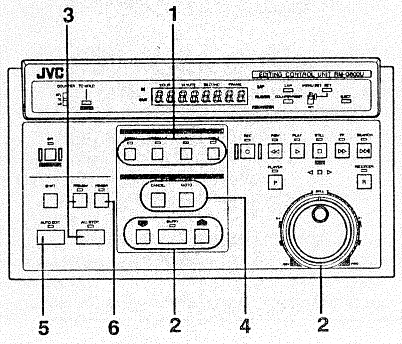
4 Correct edit points if necessary
Entered edit points can be corrected.

5 Execute an edit
After entering edit points, perform editing. This is referred to as "Executing an edit".

6 Review if necessary
After executing an edit, you may want to rewind and check the quality of the transition between edit points. This is referred to as "Review".

Proceed with editing by repeating the procedures above using the RM-G800U.

Procedure



1 Select edit mode.

ASSEM ☐
To perform assemble editing, press ASSEM.

VIDEO/HI-FI ☐
To perform insert editing, select the track you're going to replace by pressing either VIDEO/Hi-Fi or AUD-1 or AUD-2.

AUD-1 ☐
VIDEO/Hi-Fi: Prerecorded video and Hi-Fi audio track is replaced by new material.
AUD-1: Prerecorded normal audio-1 track is replaced by new material.

AUD-2 ☐
AUD-2: Prerecorded normal audio-2 track is replaced by new material.

2 Enter edit points.
Set edit-in point for each VCR (Feeder/Recorder) and set edit-out point for either Feeder or Recorder.

PLAYER P
Press "P" to set data for Feeder and press "R" to set data for Recorder.

RECORDER R
Locate desired edit point using JOG/SHUTTLE controls.

IN ☐ ENTRY ☐
To enter edit-in point, press ENTRY while pressing IN.

ENTRY ☐ OUT ☐
To enter edit-out point, press ENTRY while pressing OUT.

3 Preview if necessary.

PREVIEW ☐
Press the PREVIEW button to check transition between edit points before executing an actual editing.
→ The Recorder and Player start to run as they would in actual editing, and then enter the Still mode.

ALL STOP ☐
To quit during preview editing, press the ALL STOP button.

4 Correct edit points if necessary.
Entering a new edit point automatically cancels the previous edit point.

To confirm the picture at the edit point: Press the GOTO button while pressing the IN or OUT button.

GOTO ☐
→ The VCR accesses the designated edit point and enters the Still mode.

To cancel an edit point without entering a new one:

CANCEL ☐
Press the CANCEL button while pressing the IN or OUT button.

To correct edit points more precisely: Turn the JOG dial while pressing the IN or OUT button.

5 Execute the edit.

AUTO EDIT ☐
Press the AUTO EDIT button.
→ Automatic editing is executed.

6 Review if necessary.

REVIEW ☐
Before you enter new edit points for next edit, press REVIEW.
→ Recorder automatically plays back the last executed.

For details about editing using the RM-G800U, refer to the RM-G800U's instruction manual.

Though a picture may be distorted on the monitor at the edit-in or -out point while in the preview or automatic editing modes, the actual transition is not affected and edited pictures will be normal.

VCR operation during editing

1. Both Feeder and Recorder preroll.
2. Both Feeder and Recorder start playback.
3. Recorder's mode changes to Record at the edit-in point.
4. Ends editing at the edit-out point.
   In assemble editing: Recorder keeps recording after the edit-out point for about 2 seconds.
   In insert editing: Recorder's mode switches to playback and runs for about 2 seconds.
5. Both Feeder and Recorder return to the edit-out point and enter the Still mode. (If RM-G800U Menu item #01 "OUT POINT RETURN" is set to "00".)

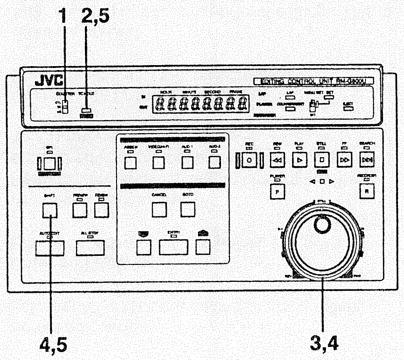
To stop editing while editing is in progress:
Press ALL STOP. Editing stops at the point where the button is pressed.

☞ p.54 GLOSSARY: Assemble editing, Insert editing

8-4 TIME CODE SETTING

Preparation

- To use VITC or LTC time codes, you must first install the optional time code generator/reader SA-R50U.
- Optional boards are not required when using CTL time codes.
- Put the Recorder in the Stop mode.



Procedure

1 Select time code or user bits to be set.

COUNTER CTL TC UB

Set the COUNTER switch of both Recorder and the RM-G800U to either TC or UB as desired.
TC: To set time code.
UB: To set user bits.

2 Set the time code/user bits setting mode.

TC HOLD PRESET

Press the TC HOLD button.
→ The leftmost digit on the counter will start blinking.

3 Enter the value for blinking digit.

Turn the JOG dial.
→ The value of the blinking digit changes. Set as desired.

4 Move to another digit.

SHIFT

Press the SHIFT button.
→ Blinking digit moves to right each time the button is pressed.

Repeat steps 3 — 4 until all data is set.

5 Transfer entered data.

SHIFT TC HOLD PRESET

Press the TC HOLD button while pressing the SHIFT button.
→ Entered data is transferred to the Recorder.
→ Counter stops blinking.

Checking of time code data transferred to the recorder

Press the REC button while the VCR is in the Stop or Still mode, or when no cassette is inserted.
→ Preset data is displayed on the counter.

CTL time code user bits setting

CTL time code user bits are defined by 4 digits. The last 4 digits ("SECOND" and "FRAME") are used for CTL time code user bits. Although you can set values for "HOUR" and "MINUTE",those values will no longer be effective when transferred.

After transferring the CTL time codes, you can delete recording based on the preset CTL time code data by switching the COUNTER switch to "CTL" then back to "TC".

☞ p.54 GLOSSARY: VITC, LTC, CTL time code, User bits

9 IN CASE OF DIFFICULTY

9-1 WARNING DISPLAY

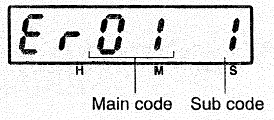
Warning displays

Various warning displays are available to indicate malfunctions. Warnings are shown by numerical codes on the counter and worded messages on the monitor screen.

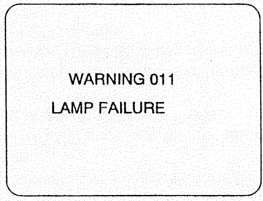
A warning code consists of a 2-digit main code which indicates the general content of the warning and 1-digit sub code which indicates the specific nature of the problem.

Measure: When the warning display appears, take appropriate action as described below. If the problem persists, consult your local JVC dealer.

Warning display on the counter



Warning display on screen



WARNING 011
LAMP FAILURE

Warning codes

WARNING CODE: 011
On-screen: LAMP FAILURE

Symptom: Tape-begin/end sensor LED burns out.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

WARNING CODE: 021
On-screen: CONDENSATION ON DRUM

Symptom: Moisture condensation on drum.
Operation: 1. The cassette is ejected.
2. Drum starts rotating and cassettes cannot be loaded.
3. After condensation has been eliminated, the display goes off and cassettes can be loaded.
Solution: Wait until the displays turn off. Do not turn off the power.

WARNING CODE: 081
On-screen: SUP TENSION FAILURE

Symptom: Abnormal tape tension.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

WARNING CODE: 321
On-screen: FAILURE IN LOADING

Symptom: Tape cannot load correctly.
Operation: Tape unloads and the cassette is ejected.
Solution: Insert the cassette again or try another cassette.

WARNING CODE: 331
On-screen: FAILURE IN UNLOADING

Symptom: Tape cannot unload.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

9-1 WARNING DISPLAY

Warning codes

WARNING CODE: 411
On-screen: CASSETTE EJECT FAILURE

Symptom: Cassette carriage does not lift.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

WARNING CODE: 561 — 567
On-screen: TAPE DEFECTIVE

Symptom: Tape is broken.
Operation: The cassette is ejected.
Solution: If there is nothing wrong with the cassette, insert it again. Otherwise, insert another cassette.

WARNING CODE: 571 — 572
On-screen: END LEADER DETECTION

Symptom: Tape-end sensor works abnormally.
Operation: 1. Rewind mode is engaged.
2. If the leader tape is detected within 3 seconds, the cassette is ejected.
Solution: Insert the cassette again.

WARNING CODE: 581 — 582
On-screen: BEGIN LEADER DETECTION

Symptom: Tape-beginning sensor works abnormally.
Operation: 1. FF mode is engaged.
2. If the leader tape is detected within 3 seconds, the cassette is ejected.
Solution: Insert the cassette again.

WARNING CODE: 701
On-screen: DRUM MOTOR FAILURE

Symptom: Abnormal drum servo.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

WARNING CODE: 711
On-screen: CAPSTAN MOTOR FAILURE

Symptom: Abnormal capstan servo
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

WARNING CODE: 721 — 726
On-screen: SUP REEL MOTOR FAILURE

Symptom: Supply reel rotates abnormally.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

WARNING CODE: 731 — 735
On-screen: TU REEL MOTOR FAILURE

Symptom: Take-up reel rotates abnormally.
Operation: The VCR stops and all controls become inoperative.
Solution: Turn the power off and then turn on again.

When Menu switch No.343 "SUB WARNING INHIBIT" is set to "ON", the following warning codes are not available for display.

Warning code 321	"FAILURE IN LOADING"
Warning code 561 – 567	"TAPE DEFECTIVE"
Warning code 571 – 572	"END LEADER DETECTION"
Warning code 581 – 582	"BEGIN LEADER DETECTION"

9-2 TROUBLESHOOTING OTHER PROBLEMS

VIDEO PROBLEMS

Symptom: Playback picture is unstable.
Cause: Reference sync signal is set to VIDEO and the input video signal is unstable or noisy.
Solution: Take either of the following measures.
1. Set Menu switch No.003 "SYNC SELECT" to "INTERNAL". (☞p.28)
2. Set Menu switch No.003 "SYNC SELECT" to "EXTERNAL" and input an external sync signal. (☞p.28)
3. Disconnect the input video signal.

Symptom: Playback picture is blurred or interrupted.
Cause: Tracking in not adjusted correctly.
Solution: Adjust the tracking.

Cause: Video heads may be dirty.
Solution: Head cleaning is necessary. Consult your local JVC dealer.

Symptom: Picture is distorted at the switching point of recording.
Cause: Random-interlaced video signal or low S/N video signal (after repeated dubbing) has been recorded.
Solution: Set Menu switch No.000 "FRAME SERVO" to "OFF". (☞p.28)

Cause: Auto H-Phase is set to OFF.
Solution: Set Menu switch No.004 "AUTO H. PHASE" to "ON" (☞p.30)

Symptom: S-VHS recording is not possible.
Casue: A VHS tape is being used.
Solution: Use an S-VHS tape.

Cause: Menu switch No.100 "S-VHS SELECT" is set to "VHS".
Solution: Set it to "AUTO". (☞p.28)

Symptom: On-screen display is not available.
Cause: Monitor is not connected to the VIDEO OUT MONITOR connector.
Solution: Connect to VIDEO OUT MONITOR.

Cause: Menu switch No.500 "ON SCREEN DISPLAY" is set to "OFF".
Solution: Set it to "ON". (☞p.29)

Reference pages
Menu switch setting p.25

9-2 TROUBLESHOOTING OTHER PROBLEMS

AUDIO PROBLEMS

Symptom: No audio is output during playback.
Cause: Soundtrack selection is not correct.
Solution: Set the AUDIO MONITOR switch to check on which track the audio signal is recorded. (☞p.11)

Cause: Menu switch No.206 "AUD-2/LTC" is set to "LTC", and normal audio is not output from the AUD-2 track.
Solution: Set the switch to "AUD-2".

Symptom: Breaks in Hi-Fi audio during playback.
Cause: Tracking is not adjusted correctly.
Solution: Adjust the tracking. (☞p.35)

Symptom: Hi-Fi audio is not output during playback.
Cause: Menu switch No.203 "AUDIO OUT SELECT" is set to "NORM".
Solution: Set it to "SEP". (☞p.30)

Symptom: Hi-Fi audio is not output during search.
Cause: This is normal, not a malfunction.
Solution: To output normal audio from AUDIO OUT Hi-Fi during search, set Menu switch No.204 "Hi-Fi OUT AT SEARCH" to "NORM". (☞p.30)

Symptom: Normal audio is not output during search.
Cause: Menu switch No.337 "SLOW MODE" is set to "STEP".
Solution: Set it to "LINEAR". (☞p.32)

RECORDING PROBLEMS

Symptom: Recording is not possible.
Cause: Cassette's safety tab has been removed.
Solution: Reseal the slot with adhesive tape. (☞p.5)

Cause: Menu switch No.304 "RECORDING INHIBIT" is set to "ON".
Solution: Set it to "OFF". (☞p.31)

Reference pages
Menu switch setting p.25

9-2 TROUBLESHOOTING OTHER PROBLEMS

OPERATION PROBLEMS

Symptom: Control buttons are inoperative.
Cause: The REMOTE switch is set to REMOTE.
Solution: Set it to LOCAL. (☞p.12)

Cause: Menu switch No.002 "OPERATION LOCK" is set to "ON".
Solution: Set it to "OFF". (☞p.28)

COUNTER DISPLAY PROBLEMS

Symptom: Time counter does not run.
Cause: Time counting is based on the recorded CTL signals. The counter does not function with non-recorded segments.

Cause: The Menu switch setting mode is engaged.
Action: Press the MENU button to engage the time counter mode. (☞p.9)

Cause: The time counter of an optional optional remote control connected via 45-pin remote will not run at search speeds higher that X17
Action: Set Menu switches No.319 "TAPE MAX SPEED" and No.340 "SEARCH SPEED" to "X17". (☞p.32)

REPEAT PLAYBACK PROBLEMS

Symptom: Repeat start and end point cannot be set.
Cause: A different counter mode has been used to set the start and end points.
Action: Use the same counter mode (CTL or TC) for both points. (☞p.37)

Symptom: Repeat playback is not possible.
Cause: A different counter mode has been used for start/end point entry than that used for playback.
Action: Use the same counter mode for both. (☞p.37)

EDIT TIMING PROBLEMS

Symptom: There is a discrepancy between the recorder's edit point and the edit controller's.
Cause: Recorder/edit controller edit timing has not been correctly adjusted.
Solution: Refer to p.21 and set the edit timing correctly.

Reference pages
Menu switch setting p.25

Rack mount adapter SA-K65U

Required when installing the BR-S800U/BR-S500U in a 19" EIA-standard rack.

Rails and brackets

For rack installation, slide rails and brackets are required in addition to the SA-K65U. We recommend the following parts.

Accuride C-305-20 (Slide rail)
BK5355 (Bracket)

Installation

1 Attach the SA-K65U rack mount adapter to the VCR with six M4 screws.

2 Attach the inner members of the slide rails to the VCR with the six M4 screws.

3 Attach the outer members of the slide rails to the rack with the front and rear brackets.

4 Pull out the outer members of the slide rails until they stop.

5 Fix the inner members of the slide rails attached to the VCR into the rails of outer members, and insert the VCR into the rack. Insertion may be obstructed where the springs are located. Press both sides' springs and insert the VCR fully to the end.

ATTENTION:

Do not use screws more than 8 mm long, otherwise you may damage the VCR's internal circuitry.

The rack mount adapter handle is only for sliding the unit. Do not carry the unit by the handle.

Special instructions for installation of slide rails may be necessary depending the rack used. For details, consult authorized personnel at the shop where you purchased the equipment.

45-pin interface board SA-K28UA

This interface board permits control of this unit via 45-pin remote.
With this board installed in the rear panel expansion slot, the following remote controls can be used.

RM-86U
RM-G810U
RM-G860U
RM-G80U

When using RM-86U:

Set Menu switches No.330 "VIDEO EDIT DELAY" and No.331 "AUDIO EDIT DELAY" to "4 FRAMES". (☞p.32)
Set Menu switches No.319 "TAPE MAX SPEED" and No.340 "SEARCH SPEED" to "X17". (☞p.31 and p.32)

NOTES:

- SA-K28U cannot be used. Use SA-K28UA.
- When editing with a 45-pin remote via this board, be sure that the settings for Menu switch No.337 "SLOW MODE" are the same for both the player and recorder.

RS-232C interface board SA-K27UA

This interface board permits control of the unit via RS-232C remote.
An RS-232C cable is also necessary. The SA-K27UA's RS-232C connector type is D-sub 9-pin. Use "reverse-type (cross-type)" RS-232C cable.

NOTE:

SA-K27U cannot be used. Use SA-K27UA.

Digital noise reduction board SA-N50U

This board minimizes the video signal noise generated by repeated dubbing. In addition, it stabilizes video signal time base errors (jitters).

Time code generator/reader board SA-R50U

SMPTE time code (LTC, VITC, user bits) recording and playback are possible with this board installed.
To install the SA-R50U, an adapter board SA-K50U is necessary.
To install the SA-R50U on the SA-K26U RS-422 board, no adapter board is necessary.

RS-422 interface board SA-K26U

This interface board permits control of the unit via RS-422 remote.
With the SA-R50U installed in this board, LTC/VITC editing is possible via RS-422 9-pin remote.

Wired remote control RM-G30U

Controls all basic VCR operations. Cable length is 2 m.

Y/C cables

A variety of Y/C cables are available.

Model	Connected units' connector type		Length
	Output	Input	
VC-G30U	4-pin	4-pin	3 m
VC-G50U	4-pin	4-pin	5 m
VC-G3030U	4-pin	7-pin	3 m
VC-G2030U	7-pin	4-pin	3 m
VC-G2050U	7-pin	4-pin	5 m

Extension remote cable VC-G8030U

Extension cable for RM-G800U. Cable length is 3 m.

For details regarding installation or removal of optional boards, consult your local JVC dealer.

11-1 GLOSSARY

Advanced sync

Advanced sync is a sync signal supplied by the TBC which compensates for the playback signal's time lag against the reference sync signal. A signal is advanced to the reference sync signal level and then input to the TBC. By locking the playback signal to this advanced sync signal, a stable video signal synchronized with the reference sync signal can be output.

Assemble editing

The most basic editing technique, assemble editing replaces the CTL signal, video signal, and audio signal simultaneously. If material is already recorded on the tape, it is erased using the full-erase heads and there may be some picture distortion for several seconds after the last edit-out point.

Audio limiter

A circuit (or a device) which automatically regulates audio signal intensity to maintain a certain level. This can prevent sound distortion due to over-level recording but is not effective with extremely high level signals where distortion may be caused at the amplifier stage.

Auto H-Phase

This circuit minimizes phase differences in the video signal which may occur at edit transitions by matching the horizontal phase of the reference sync signal (external or input video) with that of the playback video signal.

CTL

This is an abbreviation for the "control" signal recorded on the tape to control the video signal and track tape running time. In the VHS format, one control pulse is recorded per frame on the provided control track during recording.

CTL time code

CTL time code is a kind of time code signal based on the control signal. "0" and "1" data is generated by modulating the pulse width of the CTL signal. About 60 of these binary pulses are required to denote absolute position or user bits on the tape. The CTL time code standard makes provisions for both non-drop frame mode and drop frame mode. However, with the BR-S800U/BR-S500U, only non-drop frame mode is available.

Dolby NR

This stands for "Dolby Noise Reduction". This is a noise reduction circuit for audio signals manufactured under license from Dolby Laboratories Licensing Corporation. Optimum noise reduction effect can be obtained when a tape recorded with Dolby NR is played back with Dolby NR.

E-E picture

This stands for "electric-to-electric". The video signal input to the VCR goes through the internal electric circuit and is output to the monitor screen. This picture is referred as the "E-E picture".

Frame servo

In the NTSC system, video images are produced at the rate of 30 frames per second with each frame consisting of 2 fields (odd and even). The frame servo is a mechanism which automatically synchronizes the odd and even fields on the recording tape with those on the source tape. This is necessary in editing to ensure that there is no instability at edit-in and -out points.

Hour meter

A display showing total VCR operating time. Regular maintenance should be scheduled according the number of hours shown on the hour meter.

11-1 GLOSSARY

Insert editing

The most commonly used professional editing technique, insert editing replaces the pre-recorded video signal, audio signal, or both, with new material. Insert editing is based on existing CTL signals.

LTC

Acronym for "longitudinal time code". This is a time code recorded on the tape in the longitudinal direction. Normally, with professional VCRs, the normal audio-2 track is used for LTC signal recording.

TBC

Acronym for "time base corrector". Used to correct time base errors in the playback picture.

Time code

This is a signal which denotes the absolute position on the tape synchronized with the video frame. SMPTE/EBU time code is the standard time code in the video/audio industry.

User bits

This is a portion of the time code signal allocated to the user. In SMPTE time code, an 8-digit hexadecimal number, each digit of which can have values from "0" to "F" is available for user bits while 4-digit is available in CTL time code.

VITC

Acronym for "vertical interval time code". This is a time code which is inserted in the vertical blanking interval.

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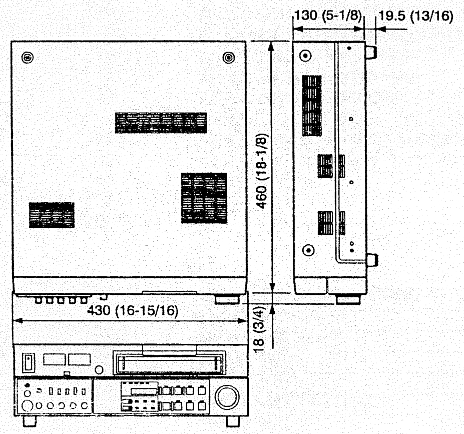
12 SPECIFICATIONS

● GENERAL	BR-S800U	BR-S500U
Format	VHS/S-VHS standard	←
Signal system	NTSC color signal	←
Recording & Playback mode	Recording:SP, Playback: SP/EP	Playback: SP/EP
Tape speed	33.35 mm/s	←
Recording & Playback time	Recording: 120 min. /Playback: 360 min.(EP)	Playback: 360 min.(EP)
Fast forward/Rewind time	Less than 2.5 min. for 120 min. tape	←
Power requirement	120 V AC, 50/60 Hz	←
Power consumption	49 W (58 W when using RM-G800U)	40 W (49 W When using RM-G800U)
Dimensions	430 (W) X 149.5 (H) X460 (D) mm	←
	(16-15/16" X 5-15/16" X 18-1/8")	←
Weight	Approx. 11.5 kg (25.4 lbs)	←
Operating temperature	5°C to 40°C (41°F to 104°F)	←
Storage temperature	–20°C to 60°C (–4°F to 140°F)	←
Humidity	30 % to 80 %	←
● VIDEO		
Composite IN	0.5 to 2.0 Vp-p, 75 ohms, unbalanced	(Not provided)
Y/C IN	Y:1.0 Vp-p, 75 ohms, unbalanced	(Not provided)
	C:0.286 Vp-p, 75 ohms, unbalanced (Burst)	
Composite OUT	1.0 Vp-p, 75 ohms, unbalanced	←
Y/C OUT	Y:1.0 Vp-p, 75 ohms, unbalanced	←
	C:0.286 Vp-p, 75 ohms, unbalanced (Burst)	←
External sync IN	0.5 to 4.0 Vp-p, 75 ohms, unbalanced	←
Horizontal resolution	More than 400 lines (S-VHS)/240 lines (VHS)	←
Signal-to-noise ratio	46 dB (S-VHS)/45 dB (VHS)	←
● AUDIO		
Number of tracks	4 (Hi-Fi X 2, Normal X 2)	←
Line IN	–6 dBs, 10 k-ohms, unbalanced	(Not provided)
Mic IN	–67 dBs, 3 k-ohms, unbalanced	(Not provided)
Line OUT	–6 dBs, 1 k-ohm, unbalanced	←
Phones OUT	– ∞ to –20 dBs, 8 ohms, unbalanced, stereo	←
Hi-Fi audio		
Frequency response	20 to 20,000 Hz	←
Dynamic range	More than 85 dB	←
Wow & flutter	Less than 0.006% WRMS	←
Normal audio		
Frequency response	50 to 10,000 Hz	←
Signal-to-noise ratio	More than 40 dB (NR-off, at 3 % distortion)	←
Wow & flutter	Less than 0.20% WRMS (Normal)	←
● ACCESSORY	Power Cord	←

Specifications shown are in SP mode unless otherwise specified.
Design and specifications subject to change without notice.

DIMENSIONS

Unit: mm (inches)



JVC®

BR-S800U
BR-S500U

CTL TIME CODE GUIDE BOOK

This booklet discusses the principles of CTL time code and explains how to use it. In addition to reading your instruction manual, please study the information provided in this booklet carefully.

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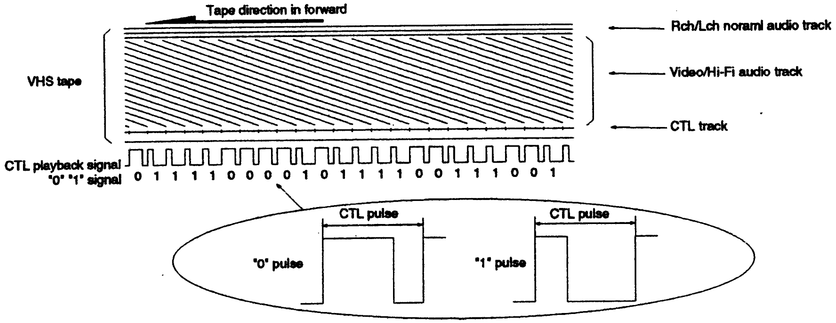
What Is CTL Time Code? 2
CTL Time Code Recording 3
Assemble Editing/Time Code Insertion ... 4
CTL Time Code Setting 5
CTL Time Code Playback 5
On-Screen Display 6
Menu Switches 6
Special Notes 7

What Is CTL Time Code?

CTL time code is based on CTL signals. By modulating the duty proportion of CTL signals, "0" and "1" signals (bits) are generated. These signals are used to denote time data and user bits data. One item of data is made up of one 2-second CTL signal containing 60 bits. Time data is indicated by 6-digit time information (hours, minutes, seconds) and user bits data is indicated by 4-digit hexadecimal values(0-9,A-F). Each item of CTL time code data is generated every 2 seconds. Frame addresses in between are interpolated with the CTL pulse. This makes it possible to denote the time code with frame-units accuracy. Thus, frame-accurate editing and cue-up are possible using the CTL time code system.



CTL Time Code Recording

- ■ While CTL time code recording is in progress, the interpolation mark "✱" on the monitor screen turns off.
- ■ When recording is attempted in the Regen mode with a drop-frame-recorded tape, the drop-frame mode is automatically engaged for recording.

To record with the time code data "00:00:00:00" from the beginning of a tape.

- This can be done with either the BR-S800U or RM-G800U.

(1) Set the BR-S800U's REMOTE switch.
- When controlling operations with the BR-S800U: Set to "LOCAL".
- When controlling operations with the RM-G800U: Set to "REMOTE".

(2) Set the COUNTER switch to "TC" or "UB".

(3) Rewind the tape to the beginning.

(4) Press the PLAY button while pressing the REC button to start recording.
→ Time code data is recorded from the value "00:00:00:00".
→ User bits data is recorded as "0000".

NOTE:
- Do not engage the Record mode until tape-begin has been detected. CTL time code recording is not possible from any point part way through the tape.
- If the Record-Pause or Stop mode is engaged during recording, CTL time code and user bits data will no longer be recorded.

To record time code that follows after existing CTL time code data on the tape.

- This can be done with either the BR-S800U or RM-G800U.

(1) Select the BR-S800U's REMOTE switch as desired.

(2) Set the COUNTER switch to "TC" and start playback.
- Make sure that the interpolation mark "✱" turns off on the monitor screen during playback.

(3) Engage the Record mode directly from the Play mode by pressing the REC and PLAY buttons together.
→ Time code data is recorded following from the existing data.
→ User bits data remains the same.

Assemble Editing/Time Code Insertion

CTL time code assemble editing or time code insert must be done with the RM-G800U.

- Set the BR-S800U's REMOTE switch to "REMOTE".
- Set the RM-G800U's Menu switch No.00 "PREROLL TIME" to "5 SECONDS" or longer.
- When editing from the beginning of the tape, first run the tape for a period longer than the preroll time before executing the edit.

To edit with time codes that follow the existing CTL time code data.

("Regen" mode)

(1) Set the COUNTER switch to "TC" and start playback. Check that the interpolation mark "*" turns off on the monitor screen.

(2) Execute assemble editing or time code insert.
- For editing procedures, refer to the RM-G800U's instruction manual, sections 6-2 and 6-4.

→ Time code data is recorded following after the existing time code data.
→ User bits data remains the same.

CTL time code insertion
- To set the CTL time code insert mode, press the AUD-2 button while pressing the SHIFT button.
- To start insertion, press the AUTO EDIT button. Press the ALL STOP button to stop insertion.

To record with preset time code data.

(1) Preset the time code data.
- For setting procedures, refer to the BR-S800U/S500U's instruction manual, page 46, or refer to the RM-G800U's instruction manual, page 21.

(2) Execute assemble editing or the time code insert.
→ Time code data is recorded starting with the preset value.
→ User bits data is recorded as preset.

NOTE:
When only time code data has been preset, the user bits data is determined as the value in the Regen mode for recording (or vice versa).

Time Code Setting

Time code setting must be done with the RM-G800U.

Preset

- For independent presetting of time code or user bits, set the COUNTER switch to "TC" or "UB".

(1) Press the TC HOLD button to engage the preset mode.

(2) Set the desired value using the Jog control and the SHIFT button.

(3) Press the SHIFT and TC HOLD buttons together to set the data.

Checking the preset data

- Press the REC button while the VCR is in the Stop or Still mode, or when no cassette is inserted. → Preset data will be displayed on the counter.

Cancellation of preset mode

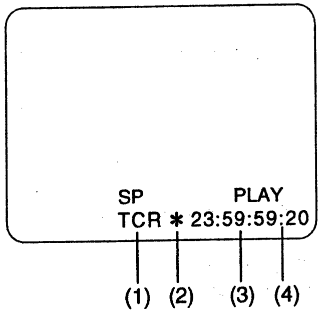
The preset mode can be canceled and the preset data can be deleted by doing either of the following:
- Set the COUNTER switch to "CTL".
- Engage the Record, Assemble edit, or Insert mode.

CTL Time Code Playback

CTL time code can be played back with either the BR-S800U/BR-S500U or the RM-G800U.

- Set the COUNTER switch to "TC" or "UB" and start playback.
  TC: Time code playback.
  UB: User bits playback.
- Possible playback speed: X1 to X11 for both forward and reverse search.
- Interpolation mode
  If there is an error in the CTL time code readout during playback, time code is interpolated with the control signals. In this case, the interpolation mark "*" is displayed on the monitor screen.
  The interpolation mark "*" is not displayed in the following cases.
  - When time data is being read every 2 seconds and frames in between are interpolated with CTL signals.
  - When a loss of data is only one item (2 seconds) during continuous time codes.

On-Screen Display



(1) CTL time code counter mode
Displayed in recording or playback.
TCR: CTL time code reader data
UBR: CTL time code user bits reader data

Displayed only when checking preset data.
TCG: CTL time code generator data
UBG: CTL time code user bits generator data

(2) Interpolation mark
During playback → "✱" is displayed in the interpolation mode.
During recording → No display during time code recording.

(3) Counter display

Time data:	24-hour mode, 8-digit display (Hours, Minutes, Seconds, Frames)
User bits data:	4-digit display with hexadecimal numbers. It is only possible to set the last 4 digits of the 8 digits user bits.

(4) Drop frame indication
" . " is displayed in the Drop frame mode and " : " is displayed in the Non-drop frame mode for both recording and playback.

Menu Switches

When the optional VITC/LTC generator/reader SA-R50 is installed, set the Menu switch No.418 of the BR-S800U/BR-S500U to select the type of time code either VITC/LTC or CTL TC.

Menu switch No.418 "VITC/LTC, CTL TC
CTL TC (1) — Selects CTL TC.
●VITC/LTC (0) — Selects VITC/LTC.
●: Factory preset

Special Notes

(1) CTL time code Recording/Playback is not possible in less than 6 seconds.
Because each CTL time code data item is formed in 2 seconds, it is necessary to run the tape for more than 6 seconds to readout the data. When playing back a tape for less than 6 seconds, or a when playing a tape on which CTL time code has been recorded for less than 6 seconds, correct data readout is not possible.

(2) Do not record CTL time code on an EP-recorded tape.
It is not possible to set the counter mode for CTL time code if an EP-recorded tape is used.

(3) Bit loss at the edit points
When assemble editing/time code insertion has been executed, information in the vicinity of the 8th bit will be lost. However, time information between edits is not interrupted.

(4) A tape with discontinuous time codes may not edit or cue up correctly.
If there is any discontinuity in recorded time codes, a malfunction may occur in editing or cue-up. When a tape contains such time codes, insert continuous time codes before using it.

(5) Preroll time must not be less than 5 seconds.
When preroll time is set to less than 5 seconds in the Regen mode, editing may be executed before reading of the recorded time codes has been completed. In this case, the Regen mode won't work correctly.

(6) Editing from the beginning of a tape
When editing from the beginning of a tape, be sure to run the tape for long enough to allow the time code to be read correctly.

(7) Drop frame indication at edit point
Even with a tape recorded in the non-drop frame mode, the drop frame indication may sometimes be displayed for 2 seconds at the edit switching point.

(8) Drop frame mode availability
The drop frame mode is available only for reading and writing in the Regen mode. Preset data writing in the drop frame mode is not possible.

(9) User bits data that should not be used.

If any of the following combinations of characters are used for user bits, errors may occur in data reading.

0FF8, 0FF9, 0FFA, 0FFB
1FF0, 1FF1, 1FF2, 1FF3, 1FF4, 1FF5, 1FF6, 1FF7
2FF8, 2FF9, 2FFA, 2FFB
3FE*
4FF8, 4FF9, 4FFA, 4FFB
5FF0, 5FF1, 5FF2, 5FF3, 5FF4, 5FF5, 5FF6, 5FF7
6FF8, 6FF9, 6FFA, 6FFB
7FC*, 7FD*
8FF8, 8FF9, 8FFA, 8FFB
9FF0, 9FF1, 9FF2, 9FF3, 9FF4, 9FF5, 9FF6, 9FF7
AFF8, AFF9, AFFA, AFFB
BFE*
CFF8, CFF9, CFFA, CFFB
DFF0, DFF1, DFF2, DFF3, DFF4, DFF5, DFF6, DFF7
EFF8, EFF9, EFFA, EFFB
*3FE, *7FC, *7FD, *BFE

192 variations in total. *: Any value of hexadecimal numbers.

(10) CTL time code may not be recorded correctly in the assemble editing/time code insertion modes if edit duration has been set to less than 6 seconds. In this case, after all edit procedures have completed, execute the CTL time code insertion again from the beginning.

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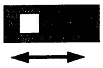
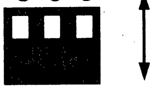
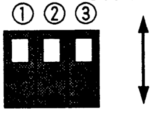
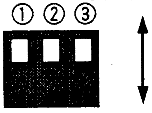
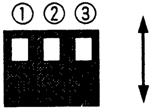
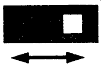
SECTION 1
GENERAL DESCRIPTUON AND DISASSEMBLY

1. 1 INTERNAL SWITCHES

▪ 1 0 VIDEO-1 board

Symbol No.	Switch Name	Setting at Shipment	Function
SW 1 : 15D	Adjusting switch	NOR  ADJ	NOR : Normal operation ADJ : Logical COMB adjustment mode Set to "NOR" for general use.

▪ 0 3 SLOT MOTHER board

<table>
<tr><th>Symbol No.</th><th>Switch Name</th><th>Setting at Shipment</th><th>Function</th></tr>
<tr><td>SW 1-1</td><td>Output selector switch</td><td>ON : SHORT
① ② ③

OFF : OPEN</td><td rowspan="2">To select one of output signals originating from the internal circuits of this set and from an optional board connected to the upper slot. For detail of switch setting, refer to the service manual of the externally connected optional board.
ON :Output signal of internal circuit is selected.
OFF :Output signal via optional equipment is selected.
For the function of respective switches, refer to the following table.
<table>
<tr><td>SW1-1-①</td><td>To select Y signal output of S-OUT terminal.</td></tr>
<tr><td>SW1-1-②</td><td>To select C signal output of S-OUT terminal.</td></tr>
<tr><td>SW1-1-③</td><td>To select output of LINE OUT-1 terminal.</td></tr>
<tr><td>SW1-2-①</td><td>To select C signal input.</td></tr>
<tr><td>SW1-2-②</td><td>Not used.</td></tr>
<tr><td>SW1-2-③</td><td>To select Y signal input.</td></tr>
</table>
<i>Note : If all of the above switches are set to OFF without connection of optional board, no signal is output.</i></td></tr>
<tr><td>SW 1-2</td><td>Output selector switch</td><td>ON : SHORT
① ② ③

OFF : OPEN</td></tr>
<tr><td>SW 2-1</td><td>Output selector switch</td><td>ON : SHORT
① ② ③

OFF : OPEN</td><td rowspan="2">To select one of output signals originating from the internal circuits of this set and from an optional board connected to the upper slot. For detail of switch setting, refer to the service manual of the externally connected optional board.
ON :Output signal of internal circuit is selected.
OFF :Output signal via optional equipment is selected.
For the function of respective switches, refer to the following table.
<table>
<tr><td>SW2-1-①</td><td>To select Y signal output of S-OUT terminal.</td></tr>
<tr><td>SW2-1-②</td><td>To select C signal output of S-OUT terminal.</td></tr>
<tr><td>SW2-1-③</td><td>To select output of LINE OUT-1 terminal.</td></tr>
<tr><td>SW2-2-①</td><td>To select C signal input.</td></tr>
<tr><td>SW2-2-②</td><td>Not used.</td></tr>
<tr><td>SW2-2-③</td><td>To select Y signal input.</td></tr>
</table>
<i>Note : If all of the above switches are set to OFF without connection of optional board, no signal is output.</i></td></tr>
<tr><td>SW 2-2</td><td>Output selector switch</td><td>ON : SHORT
① ② ③

OFF : OPEN</td></tr>
<tr><td>SW 3</td><td>TBS switch</td><td>ON  OFF</td><td>To select external sync signal input to the set.
OFF :Input signal to the SYNC IN terminal is selected.
ON :Signal that passed the optional TBS board (SA-N50) is selected. (When TBS board is connected, set this switch to ON.)
Note: "ON" and "OFF" appearing on the board differ from the ON and OFF operations of this switch shown on the circuit diagram.</td></tr>
</table>

1. 2 REMOVAL OF EXTERNAL COVERS

Note: When disassembling the set, make sure that the power is disconnected (power cord is disconnected from the AC outlet) beforehand.

Cover to remove	Screw to remove	Description
Top cover (Fig.1-2-1)	Ⓐ(2pcs.) total (2pcs.)	▪ Remove two screws Ⓐ and pull the top cover rearward to remove it.
Bottom cover (Fig.1-2-4)	Ⓑ(3pcs.), Ⓒ(1pcs.) total (4pcs.)	▪ Remove screws Ⓑ and Ⓒ (four screws in total). ***Note :Among the four screws, one screw Ⓒ is different from others.*** ▪ Release the bottom cover from two hooks Ⓕ of the rear bracket and pull it out.
Front panel (Fig.1-2-1,3,4)	Ⓐ(2pcs.) total (2pcs.)	▪ Remove the top cover. (Refer to the above description.) ▪ Remove all the knobs of the SEARCH control, TRACKING control (with washer), and various LEVEL controls. ▪ Carefully lift the front panel assembly upwards to disengage the three hooks Ⓖ retaining it in the upper side. (Fig. 1-2-3) ▪ Tilt the front panel assembly frontward to disengage the three hooks Ⓗ retaining it in the lower side, and then take out the front panel assembly. (Fig. 1-2-4). ***Note :For removing and reinstalling the cassette housing, make sure to remove the front panel beforehand otherwise the REC SAFETY switch may be damaged.***
Rear bracket (Fig.1-2-5)	Ⓓ(4pcs.) total (4pcs.)	▪ Remove four screws Ⓓ with the arrow, and pull out the rear cover. ***Note :· The rear bracket is fitted with the REAR board, which is directly connected to the MOTHER-2 board with connectors.*** ***· When reinstalling the rear bracket, it is recommended to remove the top cover to do the work easily.***
Right(Left) side cover (Fig.1-2-1,2)	Ⓔ(4pcs. each) total (4pcs.)	▪ Remove four screws Ⓔ from a side (right or left) and pull out a side cover. (Fig. 1-2-2) ***Note :When rescrewing Ⓔ, pay attention to two screw holes near the front panel. (There are two other screw holes nearby the front panel, and they are not for the screws Ⓔ as shown in Fig. 1-2-2.)***

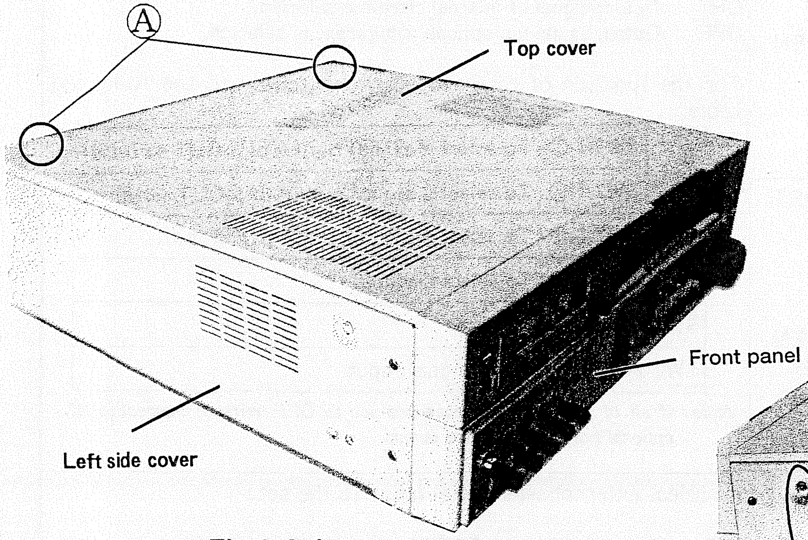
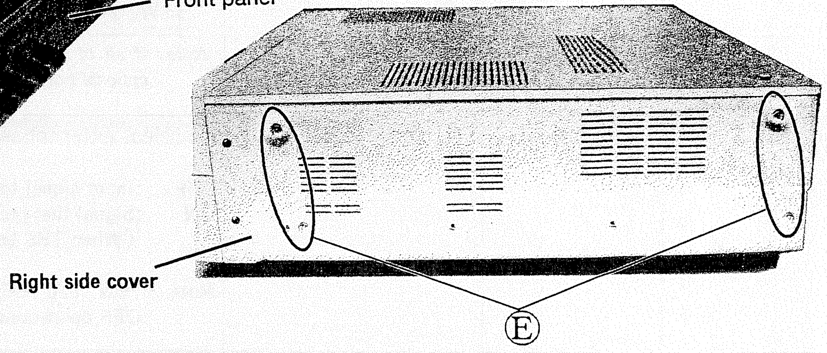


Fig.1-2-1

Fig.1-2-2



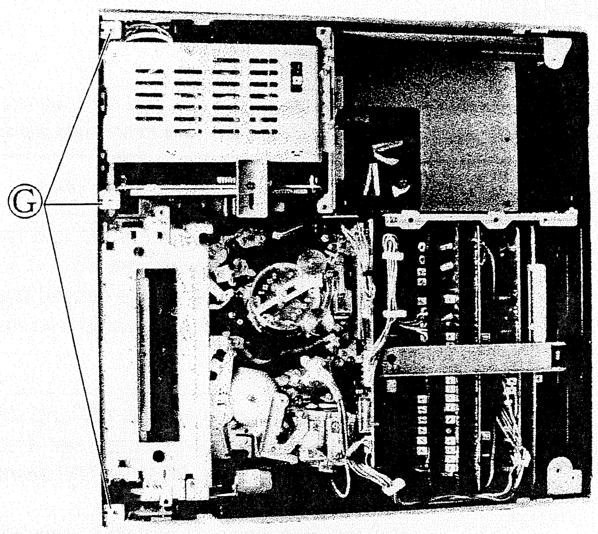


Fig.1-2-3

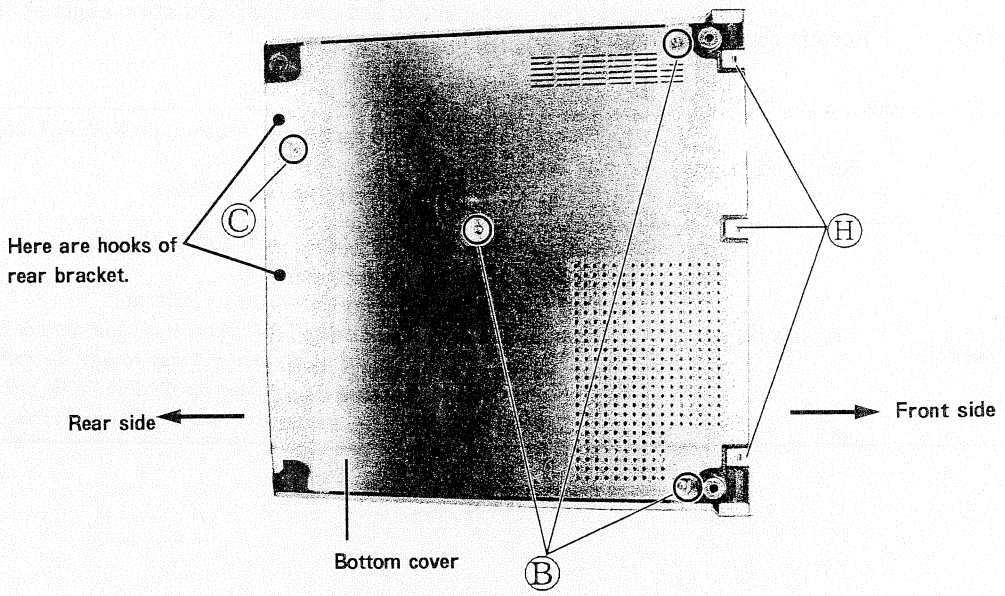

Here are hooks of rear bracket.
C
H
Rear side
Front side
Bottom cover
B

Fig.1-2-4

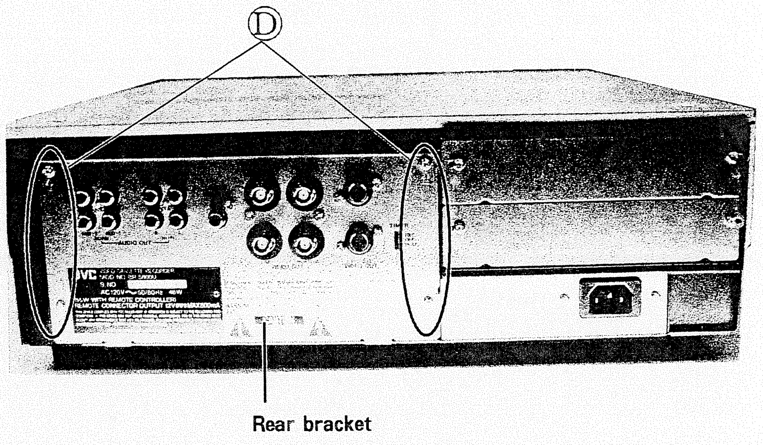

D
Rear bracket

Fig.1-2-5

1. 3 REMOVAL OF MAIN BOARDS

Note :
When removing and reinstalling boards, make sure that the power is disconnected (power cord is disconnected from the AC outlet) beforehand. When reinstalling boards and connectors that were once removed or disconnected, make sure to set and connect them as they were before removal.

Board Name	Cover to remove	Description
VIDEO (10, 11)	Top cover	1. Loosen the setscrew of the holder Ⓐ and turn the holder Ⓐ upwards. 2. Lift the desired board upward and take it out. (Disconnect the connector of the desired board if there is.) ***Note :The N. AUDIO board is connected with the FM AUDIO board.***
AUDIO (20, 21, 22)		
AV I/O 23		
SYSCON 31		1. Loosen the setscrew of the holder Ⓑ and slide the holder Ⓑ. 2. Lift the desired board upward and take it out. ***Note :For removing the SW. REGULATOR board, remove four screws retain ing it to the chassis.*** ***If the wire clamp on the bottom is removed, the SW. REGULATOR board can***
SW. REGULATOR (61, 62, 63)		
AV PRE/REC 12		1. Remove two screws retaining the AV PRE/REC board to the drum base. 2. Disconnect all connectors of the board.
SERVO M-CTL 30	Bottom cover	1. Disconnect all connectors of the board. 2. Loosen the two setscrews and open the board at an angle of 45° 3. Remove the board from the holder.
REAR 40	Rear bracket	1. Remove the screws retaining the rear bracket and REAR board together with. 2. Remove the REAR board from the rear bracket.
OPERATION (32, 33, 34, 35)	Front panel	1. Remove the screws retaining the boards to the chassis. 2. Disconnect all connectors of the boards. 3. Pull the boards frontward to remove them together. ***Note :For removing the OPERATION-CPU board, it is required not only to remove the OPERATION-VR board beforehand but also to pay the most careful attention to the board connector because the OPERATION-CPU board is directly connected to the MOTHER-1 board with the connector.***

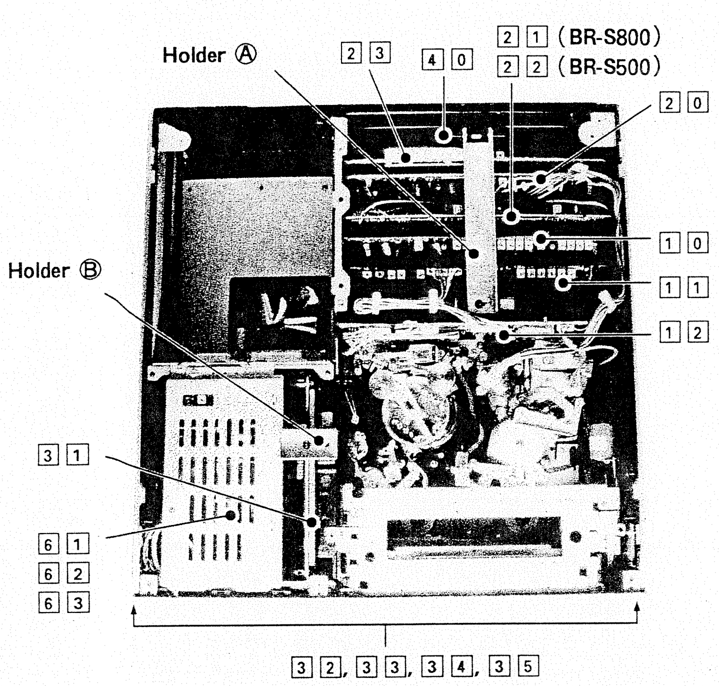

Holder Ⓐ
23
40
21 (BR-S800)
22 (BR-S500)
20
10
11
12
Holder Ⓑ
31
61
62
63
32, 33, 34, 35

Fig.1-3-1

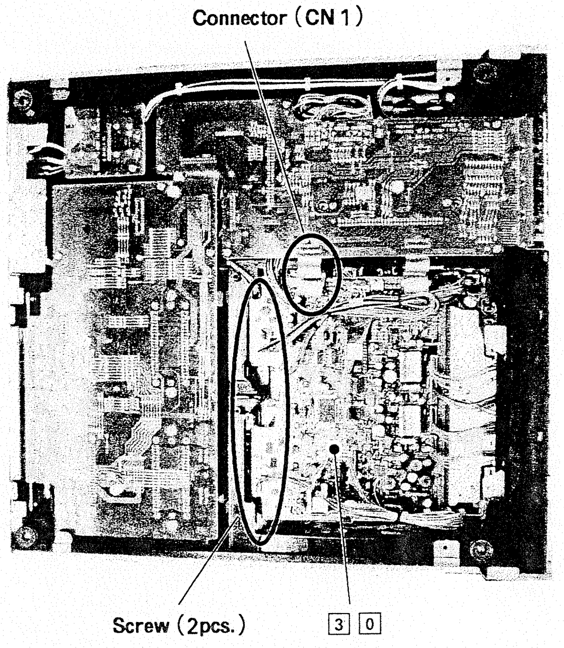

Connector (CN1)
Screw (2pcs.)
30

Fig.1-3-2

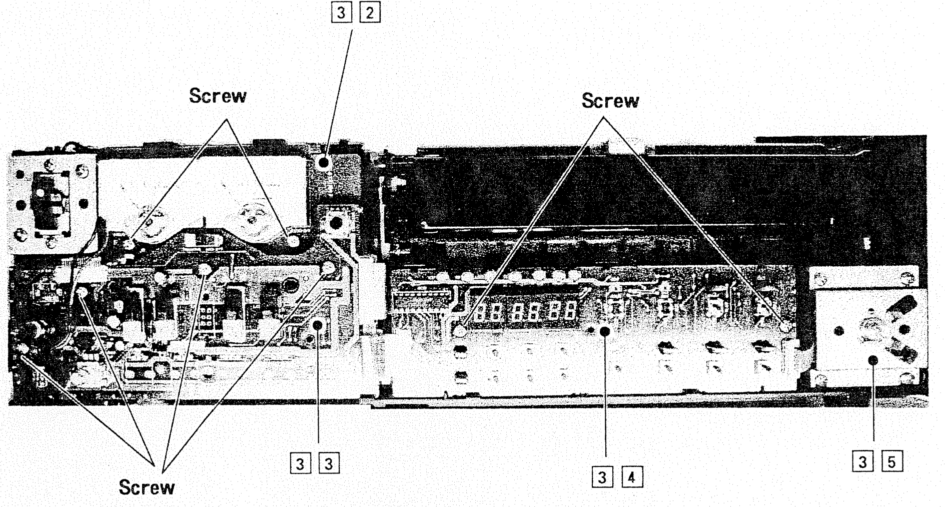

32
Screw
Screw
Screw
33
34
35

Fig.1-3-3

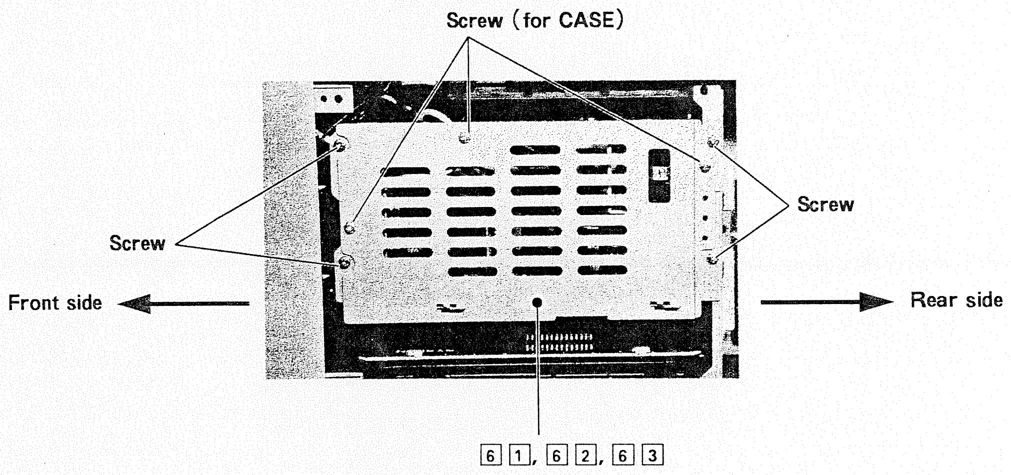

Screw (for CASE)
Screw
Screw
Front side
Rear side
61, 62, 63

Fig.1-3-4

SECTION 2
MECHANISM ADJUSTMENT

2.1 GENERAL DESCRIPTION

2.1.1 Precaution

(1) Before use of a soldering iron, make sure to disconnect the power cord of the set from the outlet.
(2) Do not pull connector cables strongly for disconnecting connectors.
(3) Do not disturb VRs and other controls unreasonably as the set has trouble of unknown origin.
(4) When inserting a cassette tape into the cassette housing, don't do it if the set is not placed right such as it is laid on its side, rear, top, or so. Otherwise the cassette housing may be damaged.

2.1.2 Jigs and special tools for mechanism adjustment

The following jigs and special tools are necessary for adjusting the mechanism.

General tools Besides the below special tools and jigs, the following general tools are necessary.

- Nut driver (5.5 mm)
- Hex. keys (0.9 mm, 1.27 mm, 2 mm)
- Ordinary screwdrivers (−) (No. 1, No. 2)
- Phillips head screwdriver (+)
- Spacers (0.1 mm)

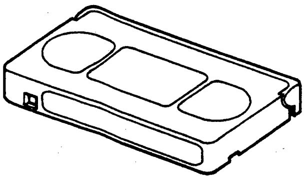
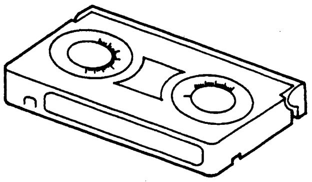
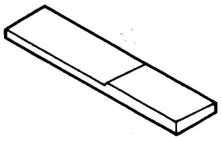
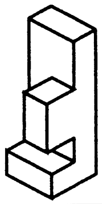
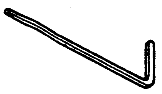
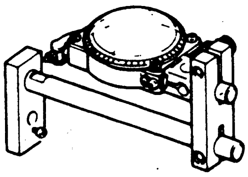
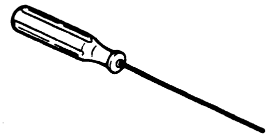
Alignment tape MHP,MBA,MBA-3,MBP-X	Cassette torque meter PUJ42881/PUJ42881B	Parallel check plate PGJ04035(0.05)/PUJ50204(0.1)	Height gauge PGJ04032
			
Line head wrench PGJ04033	Microchecker PUJ49712-2	Hex. driver PGJ04034(2mm)	
			

Table 2-1-1

2.1.3 Specifications of alignment tapes

▪MHP

Video signal	Audio signal	Application	Remark
VHS (SP mode) Stairstep	7kHz	For check and adjustment of interchangeability. For adjustment of PB switching point.	Stairstep segment of MH1 tape is substitutable.

▪MBA

Video signal	Audio signal	Application	Remark
CTL signal only	1kHz	For check and adjustment of audio PB circuit.	1 kHz segment of MH-1 tape is substitutable.

▪MBA-3

Video signal	Audio signal	Application	Remark
–	1kHz (Guard band recording)	For rough adjustment of stereo A/C head height.	Tape that MHA-3 is changed just in the name.

▪MBP-X

Video signal	Audio signal	Application	Remark
Stairstep (SP) (Non-recorded feiled every 5 frames)	7kHz	For adjustment of X-value.	Tape that MHP-X is changed just in the name.

2.2 MAINPARTS REPLACEMENT TABLE

Periodic inspection and maintenance are important to ensure the original capacity and reliability of the set. The following table shows just a maintenance and replacement standard that is compiled based on general and average use of the set. In actual, the periods will widely vary depending on environmental and usage conditions.

If the inspection and maintenance work of the following items are improperly performed, it not only shortens the periods but also gives bad influence on the set. Also keep it in mind that rubber parts may deform and age even when the set is not used and the service life of the upper drum is particularly affected by environmental and usage conditons.

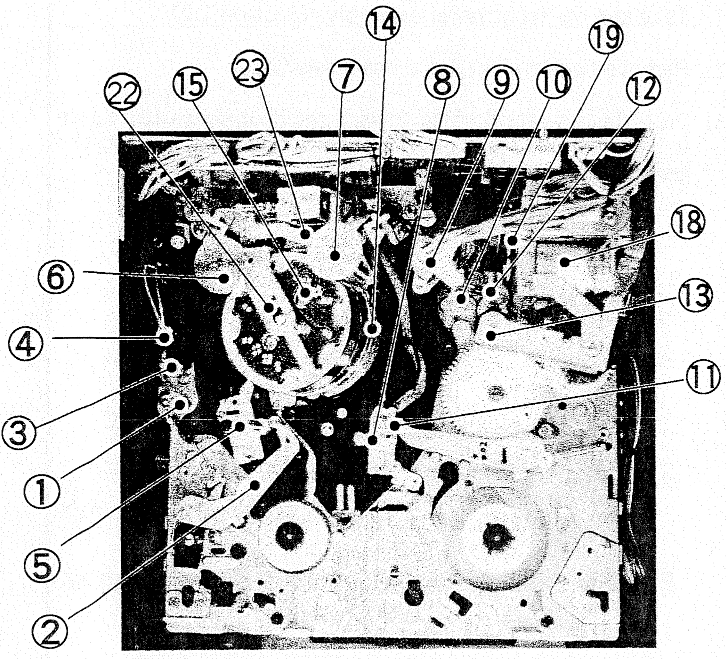
	No.	Part Name	Part Number	Standard service period ※				Ref. Sect.	Remark
				1000	2000	3000	4000		
Tape transport system	①	Supply guide shaft	—	★	★	★	★	—	
	②	Tension arm assembly	PRD43638A	★	★	★	●	2.3.7	
	③	Supply guide roller	PRD43721A					2.7.2	
	④	Full erase head (BR-S800)	PGZ01841					—	
	⑤	Supply pole base assembly	PRD30809A					2.3.13	
	⑥	Supply inertia roller	PGZ01920					2.3.2	Included in Drum assembly
	⑦	Take-up inertia roller	PGZ01920-02					2.3.2	Included in Drum assembly
	⑧	T.U. pole base assembly	PRD30811A-02					2.3.13	
	⑨	A/C head	PGZ01840					2.3.6	Excluding A/C head board
	⑩	Take-up guide roller	PRD44151A-01					2.7.3	
	⑪	Guide arm roller assembly	PRD43660A					2.7.4	
	⑫	Capstan shaft	—	★	★	★	★	—	
	⑬	Pinch roller arm assembly	PRD43387A-01	○	●	○	●	2.3.8	
	⑭	Drum assembly (BR-S800) Drum assembly (BR-S500)	LDR2001A LDR2002A	★	★	○	●	2.3.5	
	⑮	Upper drum assy (BR-S800) Upper drum assy (BR-S500)	PRD20458A PRD20485A	●	●	●	●	2.3.2／2.3.3	Included in Drum assembly
Drive system	⑯	Capstan motor	PGZ01535-01-01				●	2.3.9	
	⑰	Reel motor	PGZ01958A				●	2.3.10	Assembled part
	⑱	Mode motor	PRD44123A				●	2.3.11	
	⑲	Loading belt	PRD30022-17 PRD30022-18	●	●	●	●	—	Motor side Worm gear side
	⑳	Cassette housing	PGS21023A				●	2.3.2	
	㉑	Reel brake	PRD43388A-01		●		●	2.3.14	
Others	㉒	Brush assembly	PRD44288A		●		●	2.3.2	Included in Drum assembly
	㉓	Head cleaner	PQ44837	●	●	●	●	—	Not included in Drum assembly

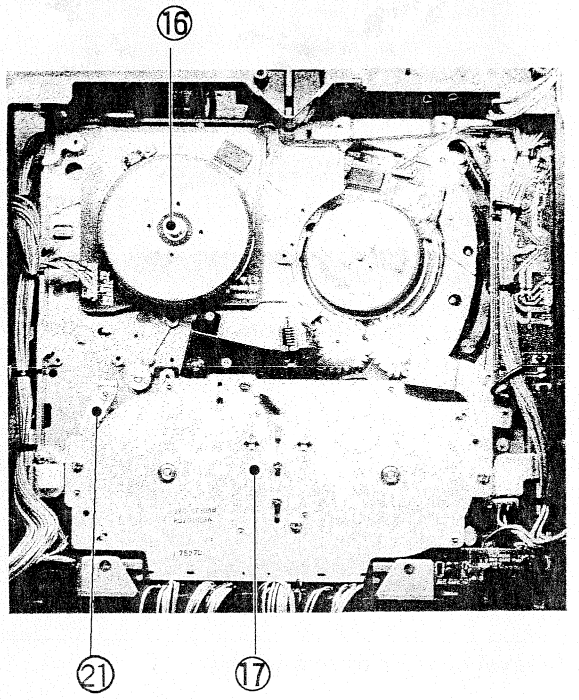
※ For service hours, follow the indication of the hour meter of the drum in principle.

★=Cleaning
○=Check and Replace if necessary, or Check and Clean
●=Replacement

2.2.1 Location of main parts

For names of respective parts indicated by numbers, refer to the table on the previous page.





2.2.2 Cleaning

Periodical cleaning of the tape transport system is desirable, however, it is almost impossible to put it into practice on schedule. Therefore, it is strongly recommended to clean the tape transport system when a set is brought in for repair, etc. For cleaning, use fine wooven cotton cloth (like cotton shirting) moistened with ethylalcohol.

(1) Dirty video head causes rough playback picture and non-reproduction of picture in an extreme case.
To clean the video heads, lightly press such cotton cloth as mentioned above to the upper drum while turning the upper drum.

Note:
Do not move the cleaning cloth on the upper drum since the video head is weak against vertical force. Otherwise, the video heads may be damaged.

(2) Dirty tape guide not only gets the video heads dirty much more but also damages tapes.
(3) Dirty and dusty brush causes snow noise in playback picture and non-picture reproduction.

2.2.3 Oiling and greasing

If oil or grease on the other party is dirty and aged in case of parts replacement, wipe it off and apply new oil or grease as well as to do it for new parts.

(1) Oil and grease used in this set are as follows.

Item	Name	JVC Part No.
Oil	Cosmo Hydro HV56	COSMO-HV56
〈General spindle oil (low viscosity) is substitutable〉		
Grease	Moriton Grease (Black)	MOS2-C
	Fuloil G-31KAV (light blue)	KANTO-G-31KAV
	FULOIL GB-TS-1 (brass)	KANTO-GB-TS-1

(2) Grease the control cam every 2000 hours of operation.
(3) For other parts, apply grease to them every 4000 hours of operation or on parts replacement.

2.3 REPLACEMENT OF MAIN PARTS

<table>
<tr><th>No.</th><th>Item</th><th>Adjustment & Check</th></tr>
<tr><td>1</td><td>

Cassette housing assembly

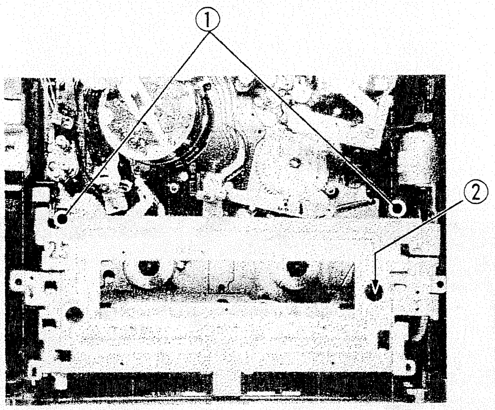


Fig.2-3-1 Removal of cassette housing assy

</td><td>

Note:
When reinstalling the cassette housing assembly to the set, do it as the front panel is taken off otherwise the REC safety switch may be damaged.

(1) Take out the front panel assembly. (Section 1.2)

(2) Remove two screws ① and one screw ②.

(3) Push the cassette housing toward the drum once to release it from the hook, and lift it upward while disconnecting the housing connector and taking it out.

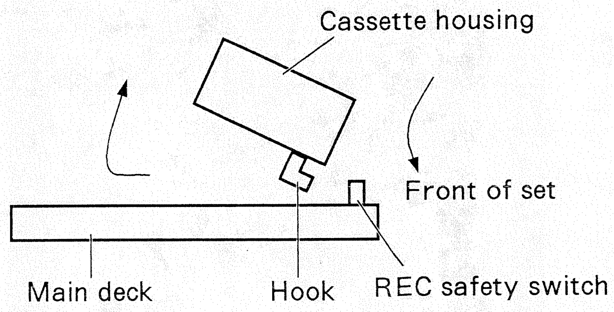

Cassette housing
Front of set
Main deck
Hook
REC safety switch

Fig.2-3-2 Reinstallation of cassette housing assy

</td></tr>
<tr><td>2</td><td>

Removal of upper drum assembly

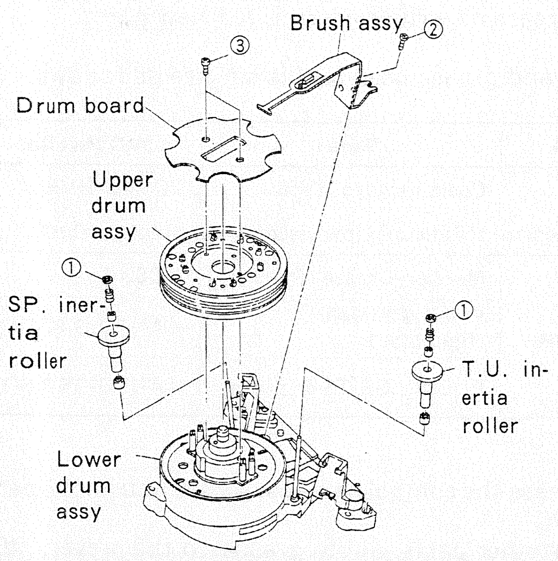

Brush assy
②
③
Drum board
Upper drum assy
①
SP. inertia roller
①
T.U. inertia roller
Lower drum assy

Fig.2-3-3 Removal of upper drum assembly

</td><td>

(1) Remove the head cleaner assembly.

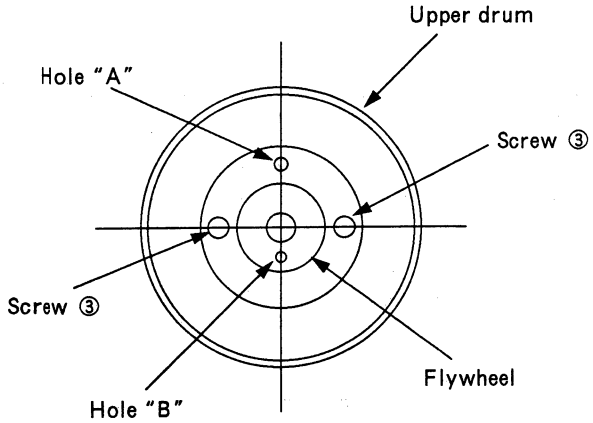
(2) Remove two slit washers ① and then remove the inertia roller with careful attention to spring, etc. not to lose them.
Note:
When the slit washer is removed, replace it with new one (Part No. PQM30017-25).

(3) Remove one screw ② and then remove the brush assembly.

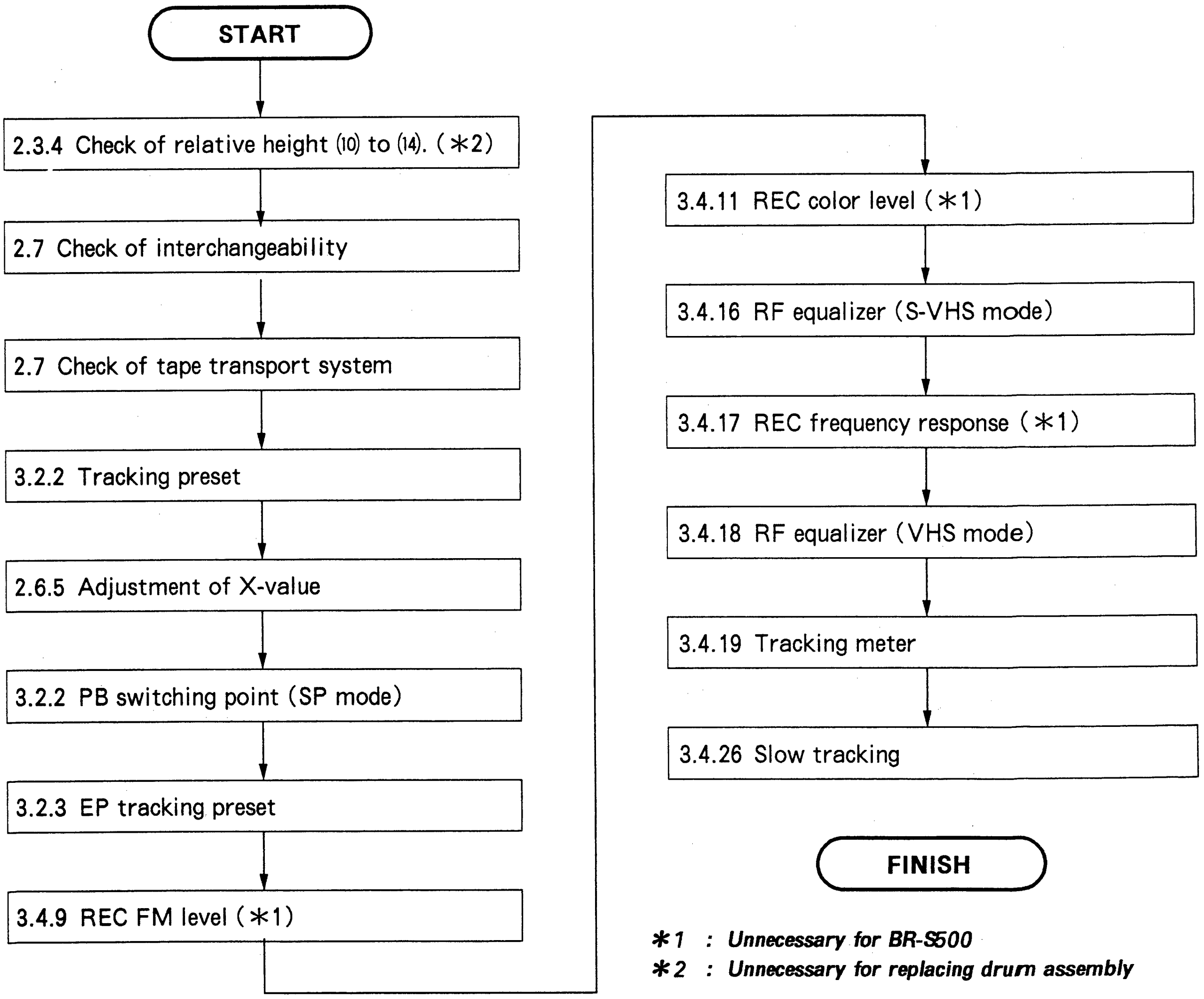
(4) Unsolder on the DRUM board and remove solders.

(5) Remove two screws ③ and take out the upper drum assembly.

</td></tr>
</table>

No.	Item	Adjustment & Check
3	**Reinstallation of upper drum assembly**  Upper drum Hole "A" Screw ③ Screw ③ Flywheel Hole "B" Fig.2-3-4 Reinstallation of upper drum assy	(1) Clean the respective contact surfaces of upper drum assembly and the lower drum assembly with alcohol. (2) Install the upper drum assembly so as to face the hole "A" (φ2.7mm) of the upper drum and the hole "B" (φ1.6 mm) of the flywheel right opposite to each other (at an angle of 180. For fixing them, tighten the screws ③ with a torque of 0.441 to 0.49 N.m. (3) Proceed to check the "Centering of upper drum" (subsection 2.3.4, steps (1) through (9)). (4) After confirming the upper drum centering, solder the DRUM board. (5) Reassemble the brush assembly and the head cleaner assembly to the drum assembly. (6) After the adjustment, proceed to the following check and adjustment.

— Check and adjustment —



START
2.3.4 Check of relative height ⑽ to ⒁. (✽2)
2.7 Check of interchangeability
2.7 Check of tape transport system
3.2.2 Tracking preset
2.6.5 Adjustment of X-value
3.2.2 PB switching point (SP mode)
3.2.3 EP tracking preset
3.4.9 REC FM level (✽1)
3.4.11 REC color level (✽1)
3.4.16 RF equalizer (S-VHS mode)
3.4.17 REC frequency response (✽1)
3.4.18 RF equalizer (VHS mode)
3.4.19 Tracking meter
3.4.26 Slow tracking
FINISH

✽1 : Unnecessary for BR-S500

✽2 : Unnecessary for replacing drum assembly

No.	Item	Adjustment & Check
4	Centering of upper drum	

If the upper drum is installed being deviated from the center of the drum shaft, it causes jitter, etc. When the upper drum is replaced, make sure that no wobbling is observed in the upper drum rim.

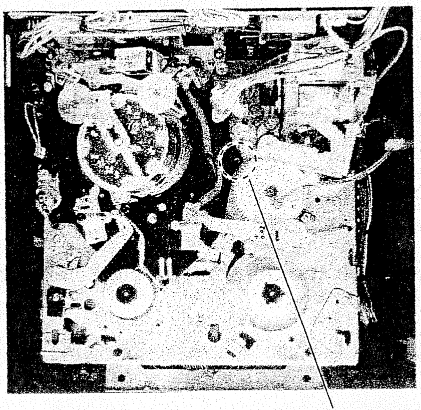
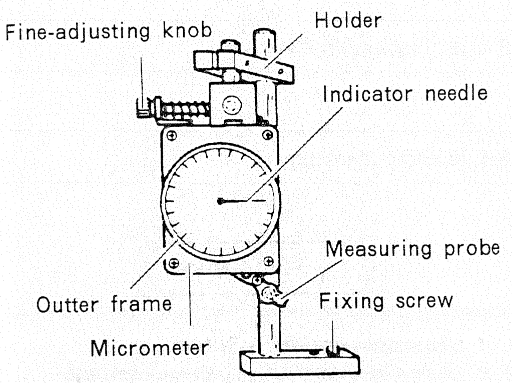


Fig.2-3-5 Mounting of microchecker

- Cautions on handling of microchecker

① Keep the microchecker out of any shock or strong vibration since it is a high precision instrument.
② Do not apply unnecessary force to the microchecker's probe.
③ Although the outer ring of the microchecker can be turned in a range of 0 graduations, do not turn it with strong force (more than 300 g-cm).
④ Be careful not to touch the microchecker's probe with the heads, particularly with the video heads.
⑤ On setting the microchecker, make sure that the working direction of the probe points at the center of the upper drum.
⑥ If rubbing or grating sound occurs in measuring, it results from bad setting or abnormal contact of the microchecker. Check that there is neither dust nor foreign substance on the upper drum and tip of the probe.



Microchecker : PUJ49712-2

Note:
For centering the upper drum, a setscrew (SDSP2610Z) is necessary besides a microchecker.

(1) Turn the mode motor counterclockwise (toward the rear side) to enter the set into the loading end state.

(2) Remove the hex. screw from the base of the microchecker.

(3) Set the microchecker holder at the place shown in Fig. 2-3-5 and fix it with a fixing screw (SDSP2610Z).
Notes:
- ***It is allowed to mount the microchecker holder at the place where the earth plate is installed under the cassette housing assembly.***
- ***If there is no internal thread for the specified screw at the place shown in the figure, use a tapping screw (SDST2608Z) to fix the microchecker holder.***

(4) Mount the microchecker with care not to knock the upper drum with it.

(5) Slowly turn the microchecker's fine adjustment knob clockwise so that the pointer indicates "0" graduation. Pointer adjustment is also possible by turning the outer ring of the microchecker, but the adjustable range is limited within 0 graduations. To apply the microchecker to the drum assembly, plae it between the 4th and 5th grooves of the drum from the top.

(6) Turn the upper drum gently with care not to apply lateral pressure to it. (Turn it with a paper string, for example). If the pointer deflects, it must be within micron at maximum.

(7) When the pointer deflection exceeds micron, turn the fine adjustment knob counterclockwise and remove the probe from the upper drum. Then, loosen two screws retaining the upper drum while adjusting the upper drum position slightly. Tighten the two screws again.

(8) Repeat check of pointer deflection and adjustment of the upper drum position until pointer deflection becomes within micron.

(9) When dismounting the microchecker, turn the fine adjustment knob counterclockwise first.

— Check of relative height —

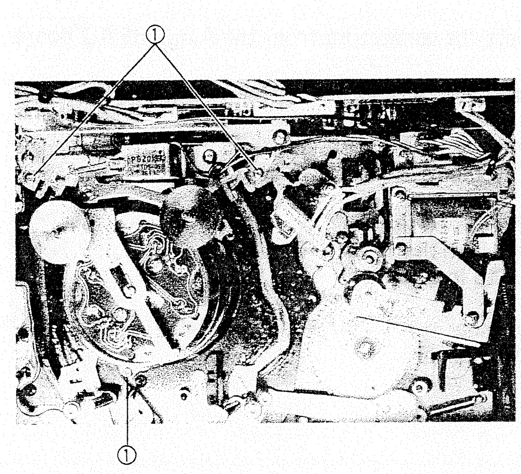
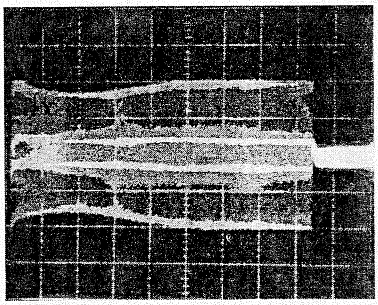
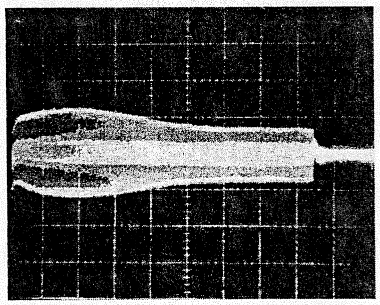
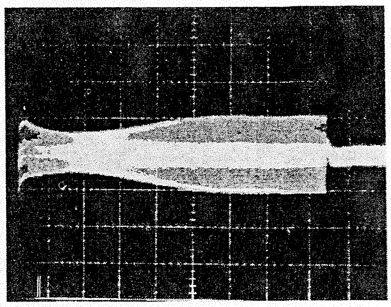
(10) Turn on the power switch.

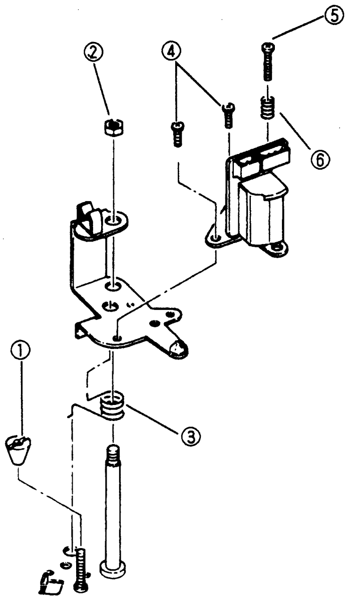
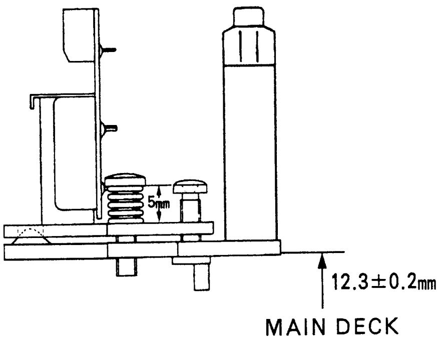
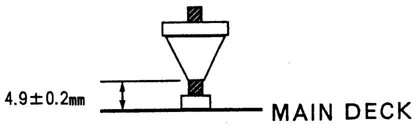
(11) Connect the oscilloscope to TP101(:8F) on the AV PRE/REC board [1][2] and play back the MHP alignment tape.

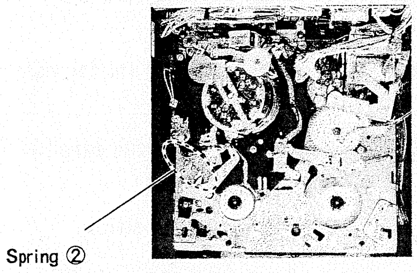
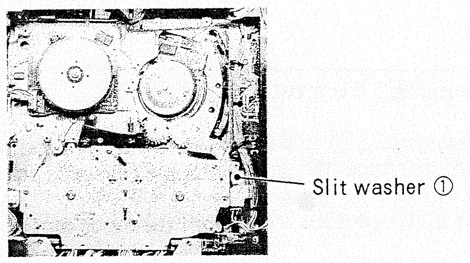
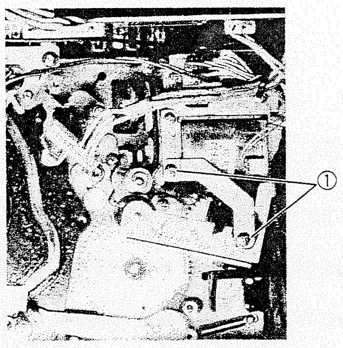
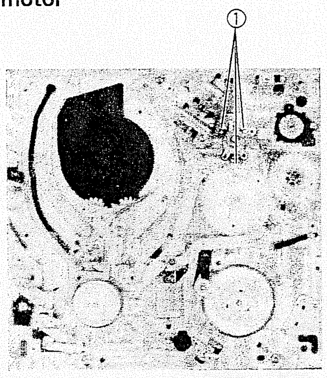
(12) Turn the TRACKING VR to check that waveforms of CH1 and CH2 become maximum at the same time.

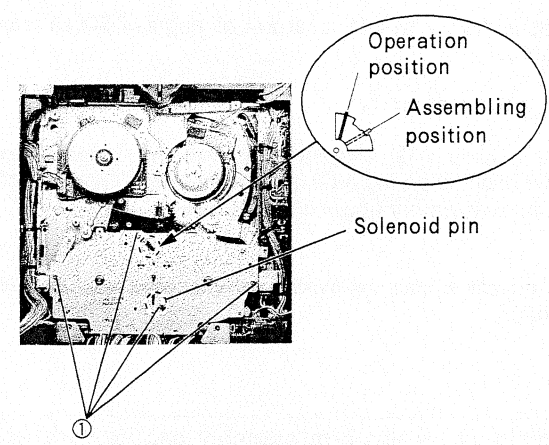
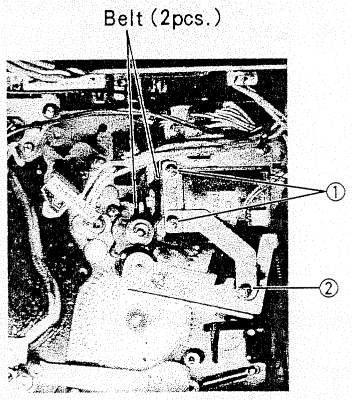
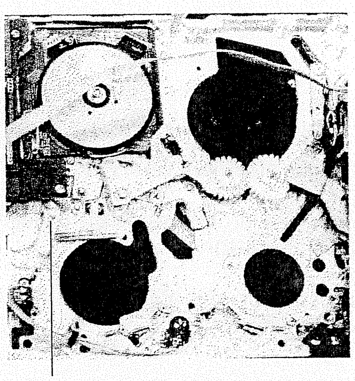
(13) If there is a remarkable time lag and level difference between the two channels, remove the upper drum once and clean the upper surface of the flywheel of the lower drum. Fit the upper drum again and repeat the above steps (1) through (12).

(14) If the result of repeated adjustments of the steps (1) through (13) does not meet the requirement, replacement of the drum assembly is recommended.

No.	Item	Adjustment & Check
5	**Drum assembly** **(Upper drum + Lower drum + Inertia rollers + Brush)**  Tightening torque: 0.49 N-m (5kg-cm) Fig.2-3-6 Removal of drum assembly	***Note:*** ***When holding the drum assembly, make sure not to touch the brush assembly. When replacing the pole base, do it as the drum assembly is removed.*** (1) Remove the AV PRE/REC [1][2] board. (2) Remove the head cleaner assembly. (3) Disconnect the connector (bottom side) and remove three screws ①, then remove the drum assembly to replace it with another. (4) After replacement of the drum assembly, conduct check and adjustment according to the flowchart illustrated in page 2-5.
	— Reference — **Before replacing drum assembly.**  Tracking center  Tracking (−)	(1) Connect the oscilloscope to TP101(:8F) on the AV PRE/REC board [1][2] and trigger it externally with signal of TP102(:7G) on the same board. (2) Play back the MHP alignment tape while observing the waveform with turning the TRACKING VR. (3) When the waveform in the supply side shows such a tendency as shown in the figures, the drum lead is worn out and needs to replace.  Tracking (+)

No.	Item	Adjustment & Check
6	**A/C head** **— Removal —**  Fig.2-3-7 Removal of A/C head	(1) **Tools to prepare:** **• Ordinary screwdriver (−)** **• Nut driver : 5.5mm** (2) Disconnect the connectors from the A/C HEAD board. (3) Remove the taper nut ① for X-value adjustment. (4) Remove the nut ② and then remove the A/C head together with the head base with care not to lose the spring ③. (5) Remove two screws ④ and a screw ⑤ to remove the A/C head. At that time pay careful attention to the spring ⑥ not to lose it. (6) Unsolder the A/C HEAD board and replace the A/C head with new one.
	— Reinstallation —  Fig.2-3-8 Temporary installation of A/C head	(1) Before assembling the A/C head to the main deck, conduct rough adjustment of the head height as shown in Fig. 2-3-8. (2) Assemble the A/C head and its peripheral parts to the main deck in the reverse order of the disassembly. (3) When fitting the taper nut, temporarily adjust the height as shown in Fig. 2-3-9.  Fig.2-3-9 Temporary fitting of taper nut
	— Check and adjustment —	***Note:*** • ***For tape transport check to be conducted before adjustemnt, don't use any alignment tape but use a general recording tape since there is a fear of tape getting damaged.*** • ***The check and adjustment should be proceeded in the following order.*** (1) Adjustment of A/C head (see 2.6.4) (2) Check of tape transport system (see 2.7) (3) Check of X-value (see 2.6.5) (4) Check of FM waveform (see 2.6.2) (5) Automatic adjustment of audio circuit (see 3.3)

No.	Item	Adjustment & Check
7	**Tension arm assembly** **— Removal —**  Fig.2-3-10 Removal of tension arm assembly	(1) Remove the cassette housing assembly. (2) Open the SERVO／M-CTL board at an angle of 90(to stand it upright). (3) Remove a slit washer ①. (4) Remove a spring ② engaged between the tension arm assembly and the spring adjust assembly, and then lift the tension arm assembly upward to remove it. ***Note:*** ***Replace the slit washer removed once with new one (Part No. PQM30017).***
	— Reinstallation —  Fig.2-3-11 Reinstallation of tension arm assy	(1) Reassemble the tension arm assembly and its peripheral parts to the main deck in the reverse order of the disassembly. (2) After replacement, conduct the following check and adjustment. ① Adjustment of tape transport system (see 2.7) ② Adjustment of reel servo circuit (see 2.5)
8	**Pinch roller arm assembly**  Fig.2-3-12 Removal of pinch roller arm assy	***Note:*** ***Proceed to do the following work in the Assembly mode (see 2.4.1).*** (1) Remove two scres ① and lift the pinch roller arm assembly upward to remove it. (2) When reinstalling, do it so as to position the cam of the pinch roller assembly on the rail of the solenoid bracket in the assembly mode.
9	**Capstan motor**  Fig.2-3-13 Removal of capstan motor	(1) Remove the pinch roller assembly referring to 2.3.8. (2) Remove three screws ① and disconnect all connectors, and then remove the capstan motor. (3) After replacement, conduct the adjustments of FG duty ratio and stop servo. (Refer to 3.2.1.)

No.	Item	Adjustment & Check
10	**Reel motor**  Operation position Assembling position Solenoid pin ① Fig.2-3-14 Removal of reel motor	(1) Position the sensor LED at the assembling position as shown in Fig. 2-3-14. (2) Turn the mode motor counterclockwise (toward rear side) to enter the set into the loading end state. (3) Remove four screws ① and remove the reel motor assembly. (4) Set a new sensor LED of the reel motor at the assembling position. (5) Position the sensor LED at the operation position. (6) After replacement, conduct the adjustment of FG duty ratio (see 3.2.1).
11	**Mode motor**  Fig.2-3-15 Removal of mode motor	(1) Disengage the belt from the motor pulley. (2) Remove two screws ① and one screw ②, and then remove the mode motor together with the motor bracket. (3) Disconnect all connectors from the mode motor and remove it.
12	**Reel brake assembly**  Slit washer : PQM30017-6 Fig.2-3-16	(1) Remove the SERVO/M-CTL 30 board. (2) Remove the reel motor. (Refer to 2.3.10.) (3) Remove a slit washer and then reel brake assembly. ***Note:*** ***When a slit washer is once removed, replace it with new one (PQM30017-6).*** Fig.2-3-17

<table>
<tr><th>No.</th><th>Item</th><th>Adjustment & Check</th></tr>
<tr><td>13</td><td>

Pole base assembly and loading arm assembly

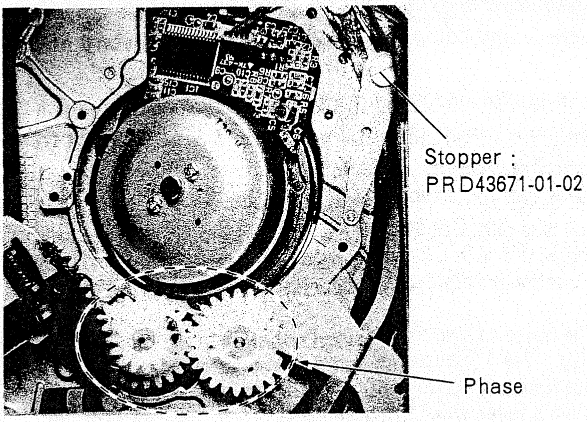


Fig.2-3-18 Removal of supply pole base assy

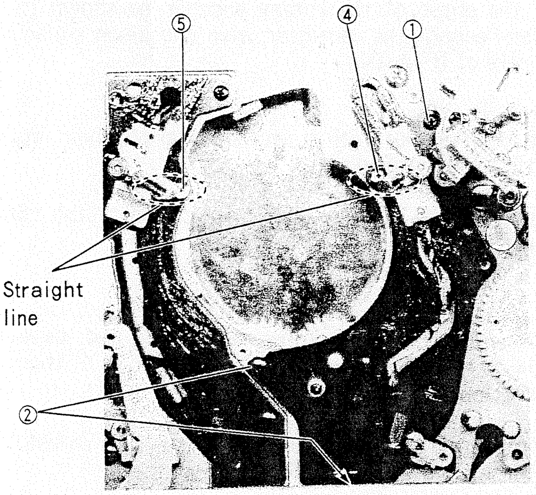


Fig.2-3-19 Removal of take-up pole base assy

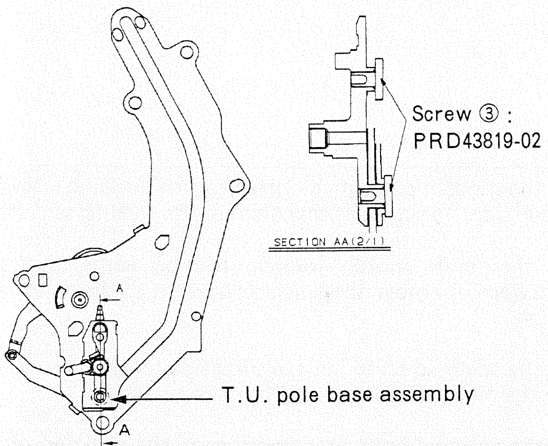


Fig.2-3-20 Removal of take-up pole base assy

</td><td>

(1) Remove the drum assembly. (Refer to 2.3.5.)

(2) Removal of supply pole base assembly.
1 Turn the loading motor counterclockwise to set the mechanism to the loading end position.

2 Remove the stopper and lift the pole base assembly to remove it. (Fig.2-3-18)

(3) Removal of take-up pole base assembly.
1 Remove a screw ④.

2 Turn the mode motor in the loading direction (toward the rear side) to set the mechanism in a loading position that the slant pole is aligned with the previous position of the screw ④ in a straight line. (Fig.2-3-19)

3 Remove a screw ① and two screws ②, and remove the take-up loading assembly. (Fig.2-3-19)

4 Remove two screws ③ and lift the take-up pole base assembly upward to remove it. (Fig.2-3-20)

(4) When reassembling, proceed as mentioned below.
1 Align the supply slant pole with the screw ⑤ in a straight line. (Fig.2-3-19)

2 Set the take-up slant pole in the position mentioned in the above step (2), and reinstall the loading assembly to the mechanism.

3 Confirm that the supply slant pole and the take-up slant pole are aligned with the screws ④ and ⑤ in a straight line.

(5) Reinstall the drum assembly.

(6) Load the mechanism with a general recording tape, which you don't mind if gets damaged, and check the mechanism operation.

---

(1) — Removal of supply loading arm assembly —
1 Remove the reel motor.

2 Remove the END SENSOR board.

3 Remove the cancel lever. (slitt washer: PQM30017-12)

4 Remove the sTOPPER retaining the supply pole base assembly to the loading arm.
(At that time, pay attention to the collar inserted between the pole base assembly and the loading arm not to lose it.)

5 Disengage the pawl of the gear from the shaft, and remove the supply loading arm assembly.

(2) — Reinstallation of loading arm assembly —
1 Turn the mode motor to set the mechanism in the loading end state.

2 Engage the supply loading gear so that the phases of the take-up loading gear and the supply loading gear are adjusted as shown in the figure. (Fig.2-3-18)

3 Reassemble the cancel lever, the END SENSOR board and the reel motor to the mechanism.

</td></tr>
</table>

2.4 ASSEMBLING OF MECHANISM

<table>
<tr><th>No.</th><th>Item</th><th>Adjustment & Check</th></tr>
<tr><td></td><td colspan="2">

There is a close relation between the rotary encoder and the mechacon circuit in the mechanism of this set, namely, operation of the mechanism components is determined and conducted according to rotation angle of the rotary encoder, in other words, turning angle of of the cam gear. Therefore, if there is any component part installed abnormally in the mechanism, it causes malfunction of the mechanism.

Disassembly and reassembly of mechanism parts of this set must be performed in the assembly mode, in which the pole base assembly is once returned to the utmost reel side and then the mode motor is turned clockwise (toward front side) to position the hole of the control cam at the same angle as that of the main deck.

Under those circumstances, make sure to conduct the following work in the assembly mode.

</td></tr>
<tr><td>1</td><td>

Cam gear
Pinch roller cam
Pinch roller
Control cam
Guide arm gear

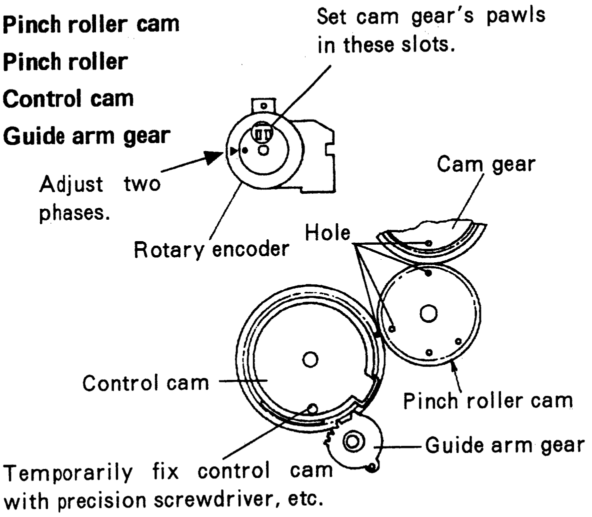

Set cam gear's pawls in these slots.
Cam gear
Adjust two phases.
Hole
Rotary encoder
Control cam
Pinch roller cam
Guide arm gear
Temporarily fix control cam with precision screwdriver, etc.

Fig.2-4-1 Assembling position

</td><td>

(1) Adjust the phase of the control cam so that its hole overlaps the hole of the main deck, and temporarily fix the control cam with a precision screwdriver, etc.

(2) As the holes of the pinch roller cam are positioned as shown in Fig. 2-4-1, assemble the pinch roller cam to the mechanism. At the same time, set the pin of the cassette housing's lever into the groove of the pinch roller cam.

(3) Fit the pinch roller to the mechanism.

(4) Adjust the phase of the rotary encoder as shown in the figure and engage the cam gear with the pinch roller cam taking care of its phase.

(5) Points of the work
① Fix the control cam with a precision screwdriver, etc. to prevent it from rotating.
② Fit the cam gear's pawl into the dimple of the rotary encoder.

</td></tr>
<tr><td>2</td><td>

Loading gear (Supply)
Loading gear (Take-up)
Cancel lever
Arm gear

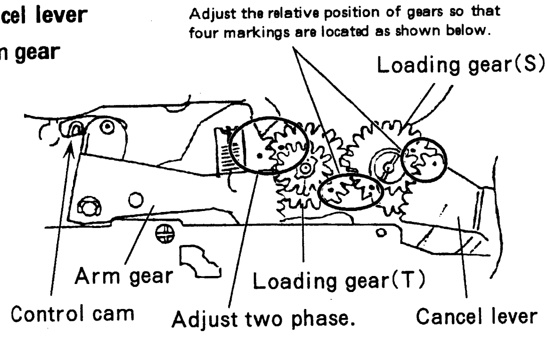

Adjust the relative position of gears so that four markings are located as shown below.
Loading gear(S)
Arm gear
Loading gear(T)
Control cam
Adjust two phase.
Cancel lever

Fig.2-4-2

</td><td>

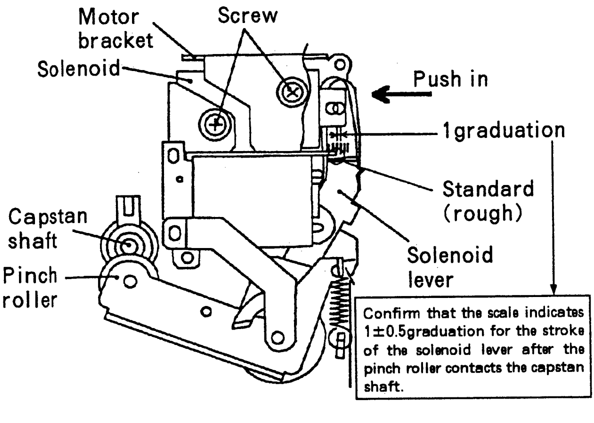
(1) Assemble the two loading gears (supply and take-up), cancel lever and arm gear so that the four holes of them are positioned as illustrated.

(2) Rotate the mode motor in the loading direction (toward the rear side) by about 12 to 14 turns.

(3) Engage the arm gear with the take-up loading gear so that they are so positioned as their phases set as illustrated.

</td></tr>
<tr><td>3</td><td>

Pinch roller solenoid position


Motor bracket
Screw
Solenoid
Push in
1graduation
Standard (rough)
Capstan shaft
Solenoid lever
Pinch roller

Confirm that the scale indicates 1±0.5graduation for the stroke of the solenoid lever after the pinch roller contacts the capstan shaft.

Fig.2-4-3

</td><td>

(1) Turn the mode motor in the direction of loading (toward the rear side) to set the mechanism in the loading end state.

(2) Turn the mode motor further in the same direction (rewarward) to move the pinch roller arm to the downmost position.

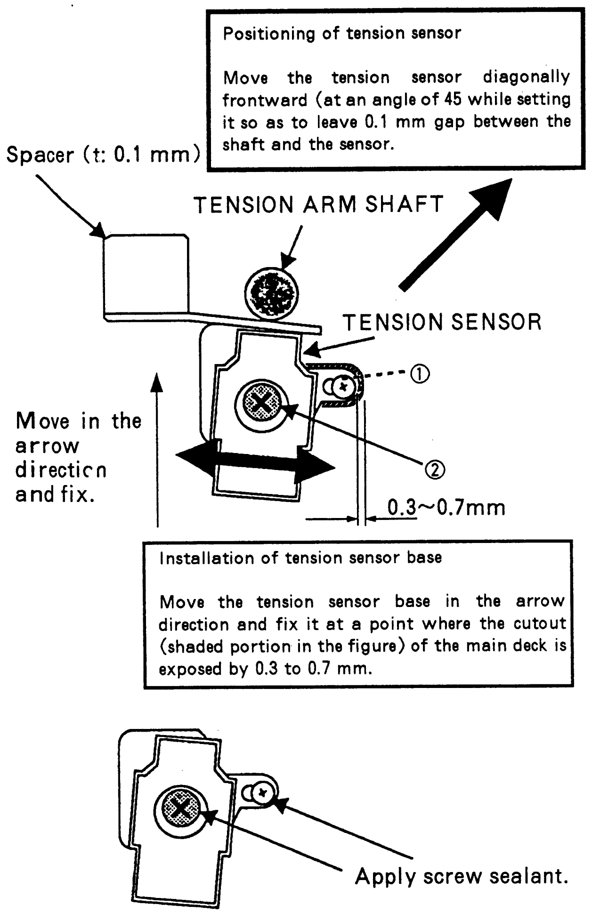
(3) Push the solenoid lever (in the direction of the arrow) to make the pinch roller contact the capstan shaft.

(4) Push the solenoid lever moreover from the position of the above step (3), and make sure that the stroke (additional movement of the solenoid lever) at that time is 1± 0.5 graduation on the scale on the solenoid lever.

(5) If the stroke is out of 1 ± 0.5graduation, loosen the setscrews and adjust the position of the solenoid lever to meet the requirement.

</td></tr>
</table>

2.5 ADJUSTMENT OF REEL SERVO CIRCUIT

No.	Item	Adjustment & Check
	When setting back the cassette torque meter, make sure to do it in the Search (X11) mode. Don't do it in the FF, REW or Reel Search mode, otherwise the cassette torque meter may be damaged. **If the SHIFT(+) or SHIFT(−) button is pressed in torque adjustment, the torque changes about 2 gr-cm every time it is pressed.** **If the cassette torque meter reaches the tape end or the tape beginning in the following adjustment, make a fresh start from the step 1).** **Test points and adjustment parts appearing in the following are located on the 30 SERVO/M-CTL board unless otherwise specified.**	
1	**Adjustment of tension sensor position**  Positioning of tension sensor Move the tension sensor diagonally frontward (at an angle of 45 while setting it so as to leave 0.1 mm gap between the shaft and the sensor. Installation of tension sensor base Move the tension sensor base in the arrow direction and fix it at a point where the cutout (shaded portion in the figure) of the main deck is exposed by 0.3 to 0.7 mm. Spacer (t: 0.1 mm) TENSION ARM SHAFT TENSION SENSOR ① ② Move in the arrow direction and fix. 0.3~0.7mm Apply screw sealant. Fig.2-5-1 Positioning of tension sensor	(1) **Required jigs:** • **Spacer (0.1 mm) or the earth plate (PRD40300) on the sub-deck of the BR-S811.** (2) Turn off the power switch and remove the cassette housing assembly. (3) Turn the mode motor counterclockwise (toward rear side) to set the mechanism in the loading end state. (4) Loosen the setscrew ① and adjust the tension sensor base position so that the its relative position to the cutout of the main deck is as shown in the figure. Then, tighten the setscrew ①. On fixing the tension sensor base, move it to the utmost end in the direction of the arrow. (5) Slightly loosen the setscrew ②. (6) Insert a spacer of 0.1 thick between the tension sensor and tension arm shaft as shown in the figure. Move the tension sensor in the diagonally frontward direction (as shown by the slant arrow) while adjusting the gap width to be 0.1 mm. Then, tighten the setscrew ②. (7) Apply screw sealant onto the setscrews ① and ②. (8) After the above adjustment, proceed to do the following adjustments. ① Adjustment of tension bias and gain (see 2.5.2) ② Adjustment of back tension in play mode (see 2.5.3) ③ Adjustment of reverse (X1 speed) torque (see 2.5.5) (9) When all of the above are over, reinstall the cassette housing to the mechanism.

Note : The test point of D. FF output is TP102(:7G) on the AV PRE/REC board.

<table>
<tr><th>No.</th><th>Item</th><th>Check point</th><th>Adjustment parts</th><th>Signal</th><th>Mode</th><th>Adjustment and Check</th></tr>
<tr><td>2</td><td>Tension bias and gain adjustment</td><td>TP22 :14D
(MCTL/ SERVO)</td><td>R222 : 14B
R214 : 14C
(MCTL/ SERVO)</td><td>–</td><td>E-E</td><td>(1) Turn the mode motor counterclockwise by hand to set the mechanism into the loading end state.
(2) Make sure that the tension arm moves to the limit and touches the guide roller.
(3) Adjust R222 to obtain 0.00 to 0.10 V as the output of TP22.
<i>Note:</i>
<i>The test points and VRs can be seen if the side cover (mechanism deck side) is taken off.</i>
(4) Utilizing the flat portion of the parallel check plate, align the supply guide rollers 1, 2 and tension pole in a straight line.
(5) Adjust R214 to obtain 1.75 to 1.95 V as the output of TP22.</td></tr>
<tr><td></td><td colspan="5">

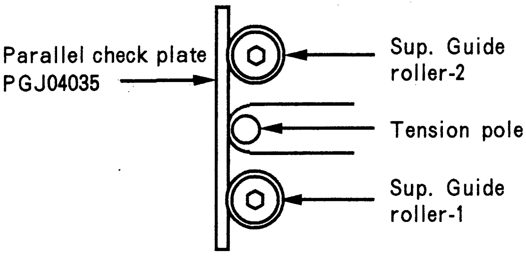
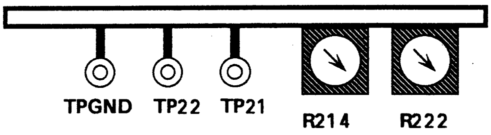


Fig.2-5-2 Tension bias and gain



Arrangement of TPs and VRs on SERVO/M-CTL board (Exposed portion when side cover is removed)

</td><td></td></tr>
<tr><td>3</td><td>Back tension in play mode</td><td>TP22 :14D
(MCTL/ SERVO)</td><td>IN/+SHIFT button (up)
OUT/−SHIFT button (down)</td><td>–</td><td>adjut mode
" 0 C"</td><td>(1) As the mechanism set in the Eject mode, connect the power.
(2) Within 2 sec after the counter display is on, press the COUNTER RESET, FF and REW buttons simultaneously and "00 00" appears in the counter display to indicate that the mechanism has entered the adjustment mode.
(3) Connect a digital voltmeter to TP22 on the SERVO/M-CTL board.
(4) Press the MENU or SET button to select the adjustment of "0C", which will appear in the counter display.
(5) Set the cassette torque meter in the cassette housing and confirm that the back tension meets the specifications.
(6) If not, adjust it again with the IN/+SHIFT (UP) or OUT/-SHIFT (DOWN) button.
<i>The following adjustments must be conducted when the spring of the tension arm is replaced.</i>
(7) Make sure that the voltage at TP22 is 1.75 to 1.95 V_{DC}. (PB mode)
(8) If not, loosen the screw retaining the spring adjusting lever for the following adjustment.
① When voltage at TP22 is above 1.95 V_{DC}.
Fine adjust the spring adjusting lever with an ordinary screwdriver so as to move it slightly rearward.
② When voltage at TP22 is under 1.75 V_{DC}.
Fine adjust the spring adjusting lever with an ordinary screwdriver so as to move it slightly frontward.
(9) Check the above steps (5), (6) and (7), and repeat the above adjustments until back tension meets the specific value.</td></tr>
<tr><td></td><td colspan="5">
<table>
<tr><th>MODEL</th><th>BACK TENSION</th></tr>
<tr><td>BR-S800</td><td>58±2 g-cm</td></tr>
<tr><td>BR-S500</td><td>55±2 g-cm</td></tr>
</table>

Table2-5-1 Table of back tension
</td><td></td></tr>
</table>

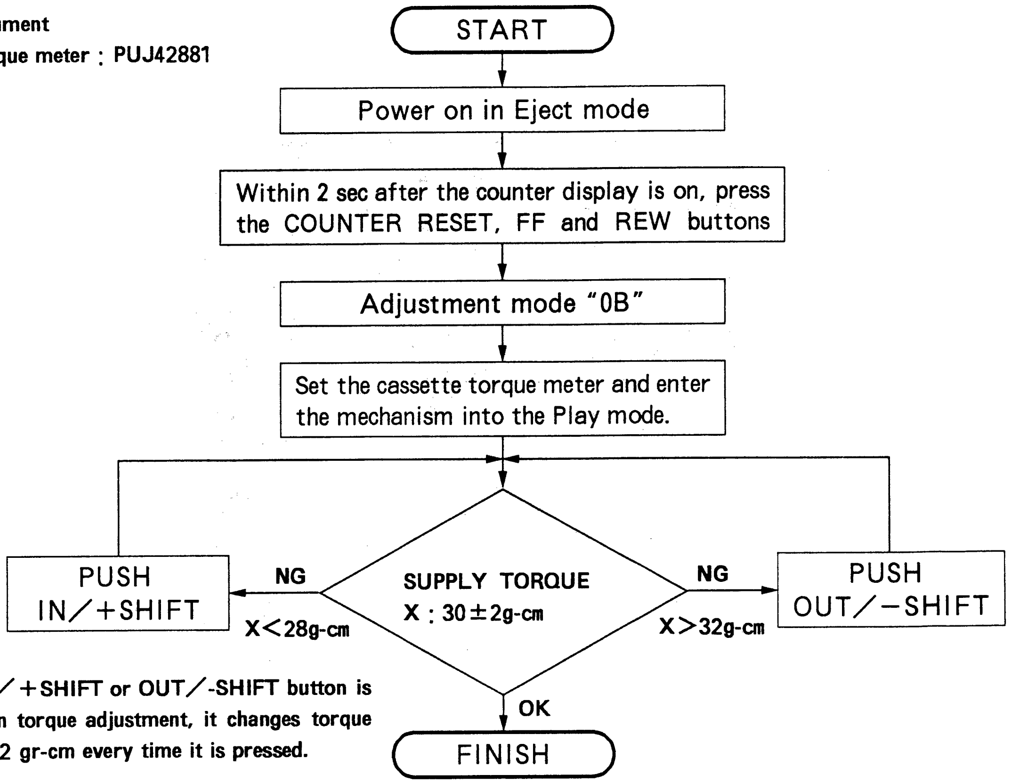
No.	Item	Check point	Adjustment parts	Signal	Mode	Adjustment and Check

4 **Loading torque**

Adjust loading torque according to the following procedure.

Required instrument

- Cassette torque meter : PUJ42881


START
Power on in Eject mode
Within 2 sec after the counter display is on, press the COUNTER RESET, FF and REW buttons
Adjustment mode "0B"
Set the cassette torque meter and enter the mechanism into the Play mode.
SUPPLY TORQUE
X : 30±2g-cm
NG
X<28g-cm
PUSH IN/+SHIFT
NG
X>32g-cm
PUSH OUT/−SHIFT
OK
FINISH

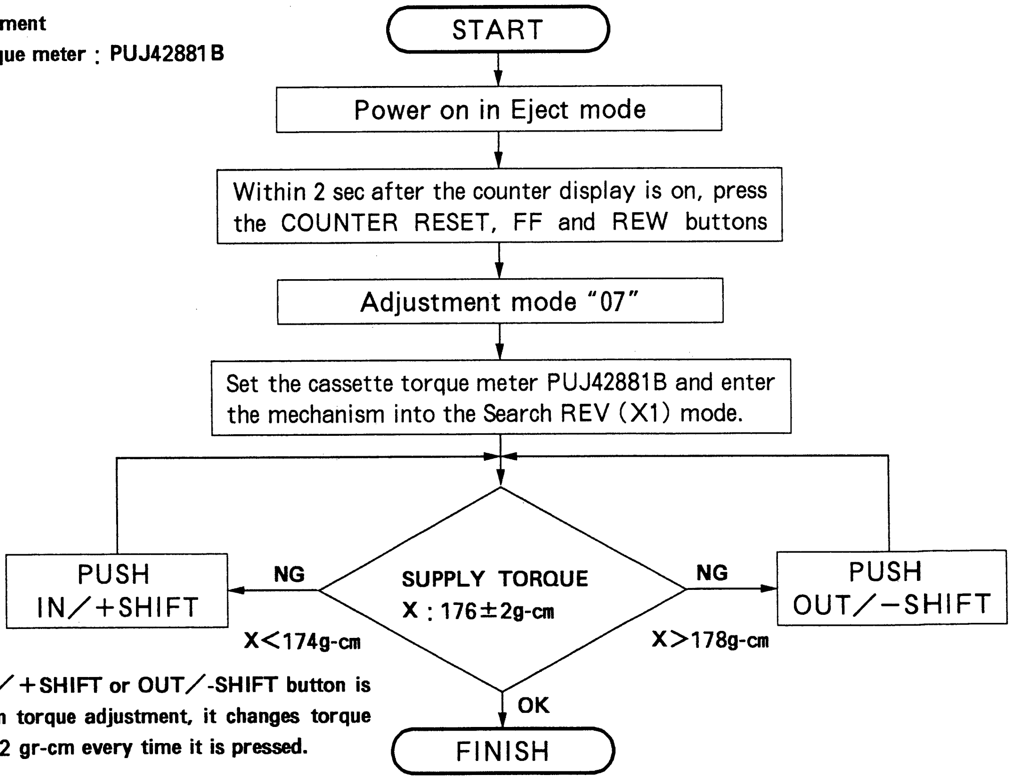
※If the IN/+SHIFT or OUT/-SHIFT button is pressed in torque adjustment, it changes torque by about 2 gr-cm every time it is pressed.

5 **Reverse (X1 speed) torque**

Adjust reverse torque according to the following procedure.

Required instrument

- Cassette torque meter : PUJ42881B


START
Power on in Eject mode
Within 2 sec after the counter display is on, press the COUNTER RESET, FF and REW buttons
Adjustment mode "07"
Set the cassette torque meter PUJ42881B and enter the mechanism into the Search REV (X1) mode.
SUPPLY TORQUE
X : 176±2g-cm
NG
X<174g-cm
PUSH IN/+SHIFT
NG
X>178g-cm
PUSH OUT/−SHIFT
OK
FINISH

※If the IN/+SHIFT or OUT/-SHIFT button is pressed in torque adjustment, it changes torque by about 2 gr-cm every time it is pressed.

2.6 ADJUSTMENT OF INTERCHANGEABILITY

No.	Item	Adjustment & Check

When the upper drum assembly, drum assembly, or A/C head assembly is replaced, adjustment of the interchangeability must be conducted.

1 **Names and locations of main parts**

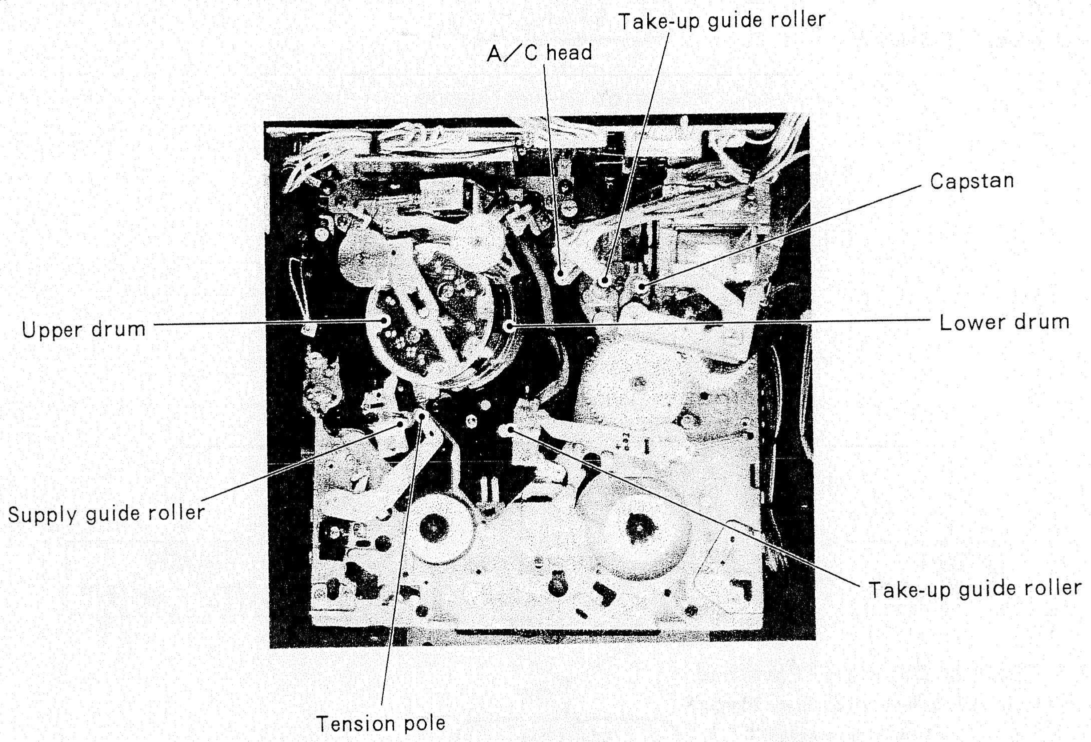

Take-up guide roller
A/C head
Capstan
Upper drum
Lower drum
Supply guide roller
Take-up guide roller
Tension pole

Fig.2-6-1 Names and locations of main parts

2 **Check of FM waveform**

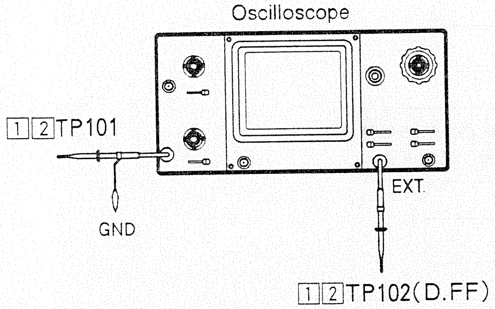
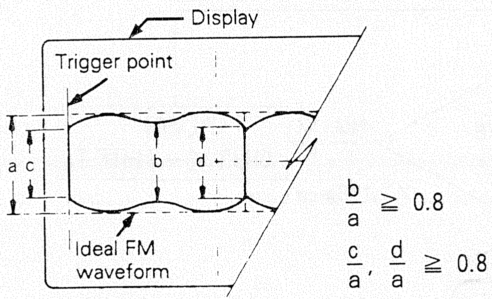

Oscilloscope
[1][2]TP101
GND
EXT.
[1][2]TP102(D.FF)

Fig.2-6-2 Connection of oscilloscope


Display
Trigger point
a
c
b
d
Ideal FM waveform

$\frac{b}{a} \geqq 0.8$

$\frac{c}{a}, \frac{d}{a} \geqq 0.8$

Fig.2-6-3 FM waveform

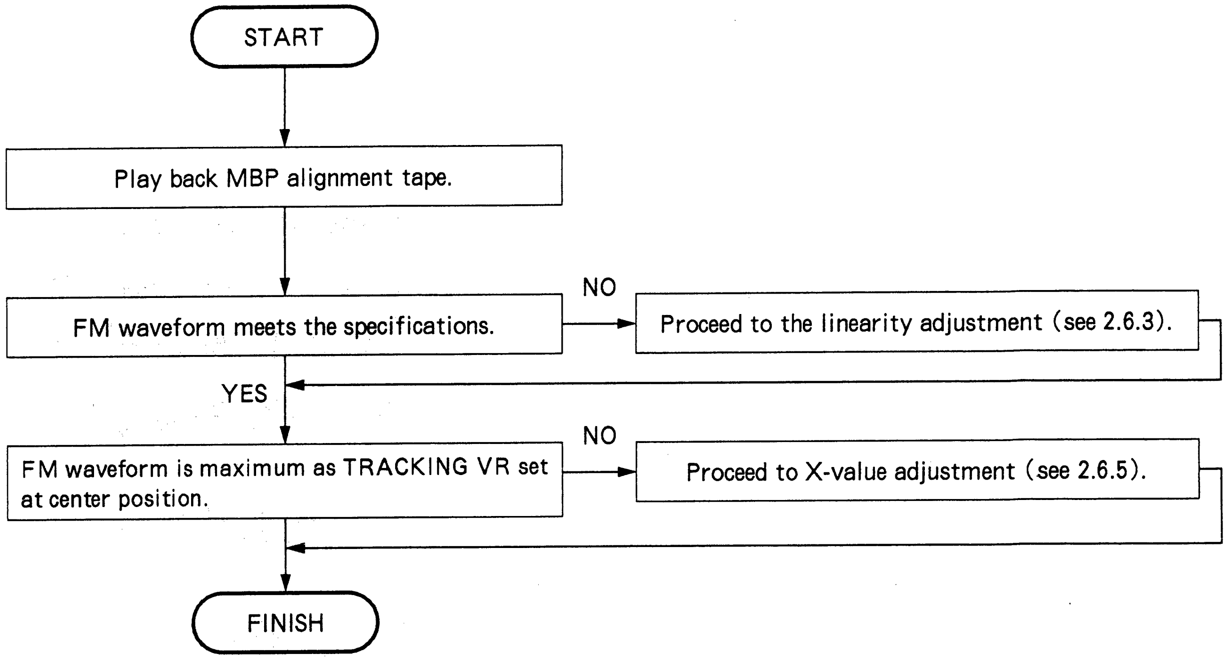
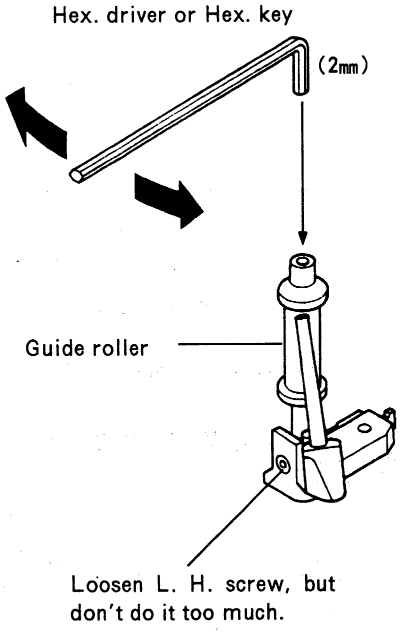
Note:
Before loading the alignment tape, load a general recording tape and check that there is no trouble with tape transport.

(1) Connect the oscilloscope to TP101(:8F) on the [1][2] AV PRE/REC board and trigger it externally with the signal of TP102(:7G) on the same board, and observe the waveform on the + slope.

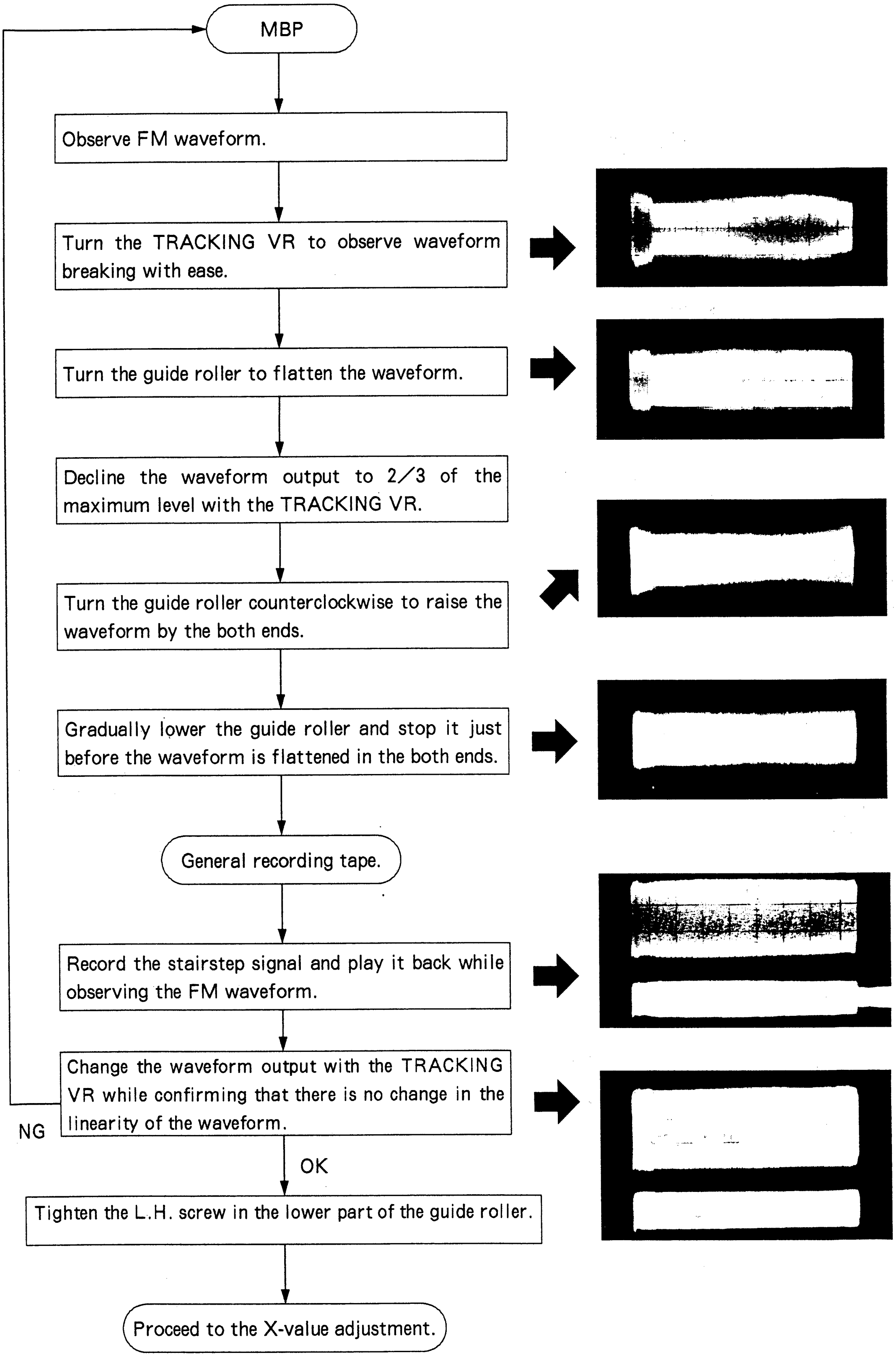
(2) Play back the MHP alignment tape while maximizing the FM waveform with the TRACKING VR. As the maximum level is regarded as "a", confirm that respective levels meet the specifications as expressed by the equations.

(3) When the maximum level "a" is set for 4 scale divisions on the oscilloscope screen, levels "b", "c" and "d" must be equivalent to 3.2 scale divisions.

(4) To set the maximum level "a" for 4 scale divisions, adjust the GAIN control of the oscilloscope as the TRACKING VR is set at the maximum position.

No.	Item	Adjustment & Check
	 START Play back MBP alignment tape. FM waveform meets the specifications. NO Proceed to the linearity adjustment (see 2.6.3). YES FM waveform is maximum as TRACKING VR set at center position. NO Proceed to X-value adjustment (see 2.6.5). FINISH	
3	**Interchangeability adjustment** **— Linearity adjustment —**  Hex. driver or Hex. key (2mm) Guide roller Loosen L. H. screw, but don't do it too much. Fig.2-6-4	(1) Cautions on adjustment • For linearity adjustment, play back the MBP alignment tape. • If FM dropout still continues after adjustment of the guide roller, the drum assembly needs replacement (in the case the CH1 and CH2 waveforms show the same tendency). • An FM waveform with worn-out lower drum is shown in the section (2.3.5) of the drum assembly replacement. • Required tools: • Hex driver : PGJ04034 (2mm) • Line Head wrench : PGJ04033

No.	Item	Adjustment & Check


MBP
Observe FM waveform.
Turn the TRACKING VR to observe waveform breaking with ease.
Turn the guide roller to flatten the waveform.
Decline the waveform output to 2/3 of the maximum level with the TRACKING VR.
Turn the guide roller counterclockwise to raise the waveform by the both ends.
Gradually lower the guide roller and stop it just before the waveform is flattened in the both ends.
General recording tape.
Record the stairstep signal and play it back while observing the FM waveform.
Change the waveform output with the TRACKING VR while confirming that there is no change in the linearity of the waveform.
NG
OK
Tighten the L.H. screw in the lower part of the guide roller.
Proceed to the X-value adjustment.

No.	Item	Adjustment & Check

4 **Adjustment of A/C head**

If the A/C head is incorrectly positioned, it causes dropdown of audio output or deterioration in its S-to-N ratio, or misaligned servo resulting from failure in picking up control signals in the worst case when a recorded tape is playback.

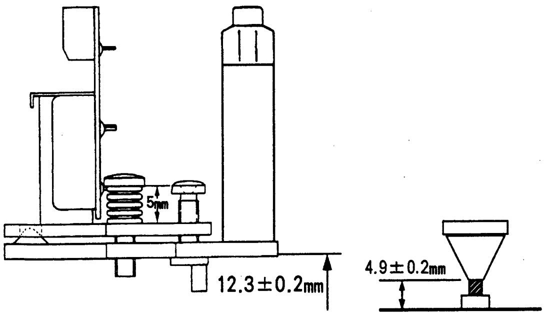


Fig.2-6-5 Adjustment of A/C head height

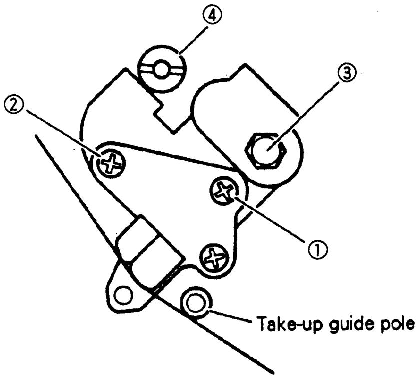


Fig.2-6-6

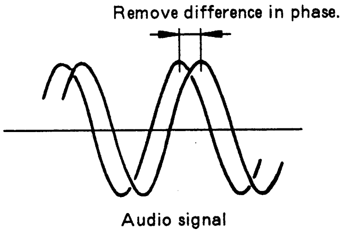


Fig.2-6-7

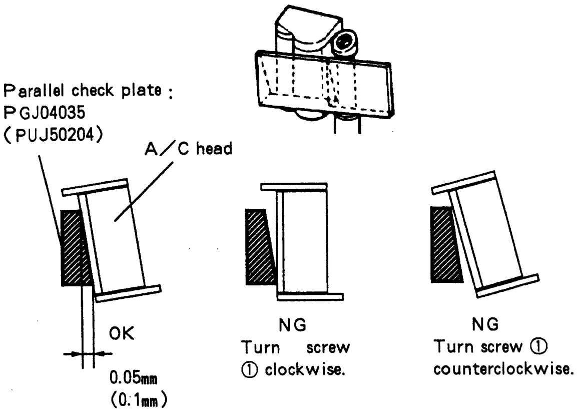


Fig.2-6-8 Parallel check

(1) **Required jig**

- Nut driver : 5.5mm
- Alignment tapes : MBA-3,MHP,MBA
- Parallel check plates : PGJ04035(0.05), PUJ50204(0.1)

(2) **Temporary check of A/C head height**

① In the stage of tape transport check preparatory to A/C head adjustment, temporarily adjust the A/C head height to prevent the tape from getting damaged as well as to conduct the adjustment with ease.

(3) **Tilt (forward bent) adjustment**

① Adjust the setscrew ① so that the A/C head closely contacts the parallel check plate surface with a tilt equivalent to 0.05mm on the base line of the plate. If there is a space between them in the upper part, the tilt is small. In that event, tighten the setscrew ① to tilt the A/C head much more. On the other hand, if there is a space in the lower part, loosen the setscrew ① to decrease the A/C head in tilt.

② Check that the tape is not damaged and wrinkled at the lower flange of the take-up guide pole. If so, fine adjust the height of the take-up guide pole.

(4) **Head height and azimuth adjustment**

① Connect CH1 of the oscilloscope with TP1 on the N. AUDIO board while CH2 with the TP2 on the same board, and set the oscilloscope to the chop mode.

② Play back the MBA-3 alignment tape while adjusting the A/C head height by turning the hex. nut ③ so as to minimize both output levels of CH1 and CH2. (Height adjustment)

③ Play back the MHP alignment tape while adjusting the setscrew ② to match output waveforms of CH1 and CH2 in the phase as well as to maximize output level of both the channels. (Azimuth adjustment)

④ Repeat the steps (2) and (3) alternately for finer adjustment.

(5) **Azimuth check**

① Connect CH1 of the oscilloscope with TP1 on the N. AUDIO board while CH2 with TP2 on the same board, and set the oscilloscope to the chop mode.

② Play back the MBA alignment tape while confirming that there is no phase difference (less than 1msec) in the output waveforms of CH1 and CH2. If there is a phase difference more than 0.1msec, repeat the height and azimuth adjustment (4) above.

(6) **A/C head parallel check**

① With the parallel check plate (PUJ50204), make sure that the tilt of the A/C head is less than 0.1mm on the base line of the check plate.

② If not, repeat the above adjustments (3) through (6) until a satisfactory result is obtained.

Test points on N. AUDIO board with addresses

	BR-S800	BR-S500
TP1	6E	4A
TP2	11E	7A

No.	Item	Adjustment & Check
5	**X-value adjustment** If the X-value is maladjusted, it results in time lag between picture and normal sound when playing back a tape recorded by a set whose X-value is correctly adjusted.	

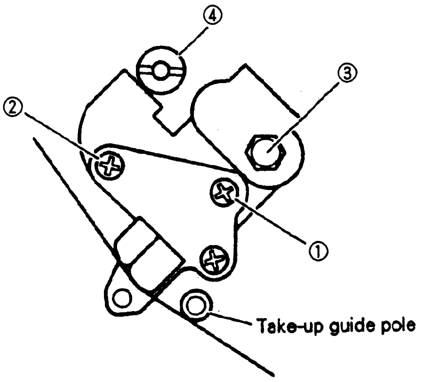


Fig.2-6-9

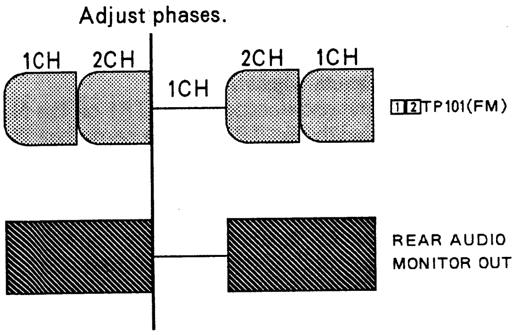


Fig.2-6-10 X-value adjustment

- **Synchronization of oscilloscope**

① Set the oscilloscope's sweep time to 10msec.

② In the condition being synchronized with D. FF signal, turn the oscilloscope's HOLD OFF knob in the ⊕ direction to stabilize non-recorded portion.

(1) **Required jig**
- Ordinary screwdriver (⊖)
- Alignment tapes : MBP-X, MHP

(2) **X-value adjustment**

① Connect CH1 of the oscilloscope with TP101(:8F) on the [1][2] AV PRE/REC board while connect CH2 with the AUDIO MONITOR terminal on the rear panel. Set the AUDIO MONITOR switch on the front panel to the NORM AUD-1/L position.

② Trigger the oscilloscope externally with signal of TP102(:7G) on the [1][2] AV PRE/REC board.

③ Play back a self-recorded tape while confirming that the FM waveform is maximum with the TRACKING VR set to the center position. If not, check to see if the tracking is correctly adjusted .
Note :
If not, fine adjust the tracking preset explained in the previous item, step (3).

④ Set the TRACKING VR to the center position.

⑤ Play back the MBP-X alignment tape.

⑥ Adjust the taper nut ④ to maximize the FM output as well as to match the non-recorded portions of AUDIO and FM outputs in the phase (field).

⑦ Play back the MHP alignment tape while confirming that the FM waveform is maximum with the TRACKING VR set to the center position.

⑧ If the result of the above step ⑦ is unsatisfactory, slide the A/C head to a point where the FM waveform is maximum near the point set in the above step ⑥.

⑨ Play back the MHP alignment tape while confirming that the FM waveform is maximum with the TRACKING VR set to the center position.

(3) **Tracking preset adjustment**

① As the set is in the Eject mode, turn off the power switch.

② Turn on the power switch again, and press the EJECT and STOP buttons simultaneously within 2 sec after the counter indicator is on.

③ When "OPEn" appears in the counter display, press the IN/+SHIFT button 8 times, and then "Tr-Adj" will appear in the counter display.

④ Set the TRACKING VR to the center click position.

⑤ Press the SET button to set adjustment data.

⑥ Press the IN/+SHIFT button repeatedly until "OPEn" appears in the counter display.

⑦ Press the MENU button.

2.7 ADJUSTMENT OF TAPE TRANSPORT SYSTEM

No.	Item	Adjustment & Check

Generally, the tape transport system has no need of adjustment since it has precisely been adjusted before the set is shipped from factory.
However, it needs check and adjustment after long time use and parts replacement of the tape transport system.

1 **Check of tape transport system**

(1) **Required implements**
- **Tin tape : ST-180**

(2) Load a thin tape, and conduct the following checks at the beginning and end portions of the tape.

(3) Repeat loading and unloading operations while confirming that the tape is neither damaged nor wrinkled at the take-up guide roller, guide pole, guide arm roller.

(4) Do the same check in the Play, FWD and REV modes, respectively.

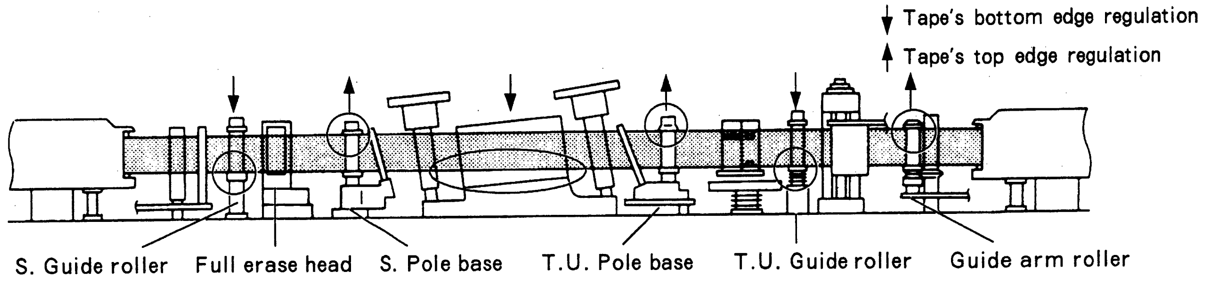

↓ Tape's bottom edge regulation
↑ Tape's top edge regulation
S. Guide roller
Full erase head
S. Pole base
T.U. Pole base
T.U. Guide roller
Guide arm roller

Fig.2-7-1 Check of tape transport

2 **Supply guide roller height adjustment**

(1) **Required implements**
- **Height gauge : PGJ04032**
- **Hex. driver : PGJ04034**
- **Hex. key : 1.27mm**
- **Thin tape : ST-180**

(2) Set the height gauge on the main deck, and check the height of the upper surface of the lower flange of the guide roller.

(3) If it needs adjustment, loosen the setscrew under the guide roller and then adjust the guide pole with a hex. driver.

(4) Forwarding a thin tape in the Play mode, fine adjust the height of the guide roller so that the tape smoothly travels on the upper side of the lower flange of the guide roller.

(5) Next, transport the tape in the REV mode while confirming the tape getting no damage. If the tape is damaged, decrease the height of the guide pole by turning the setscrew within a turn from the position that is set in the above step (3).

(6) Tighten the setscrew.

(7) Again check the tape running smoothly.

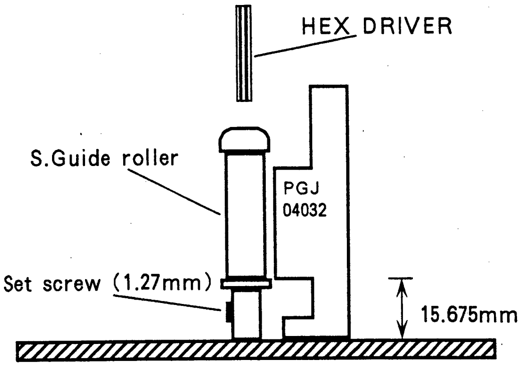

HEX DRIVER
S.Guide roller
PGJ
04032
Set screw (1.27mm)
15.675mm

Fig.2-7-2 Supply guide roller height

No.	Item	Adjustment & Check

3 Take-up guide roller height adjustment

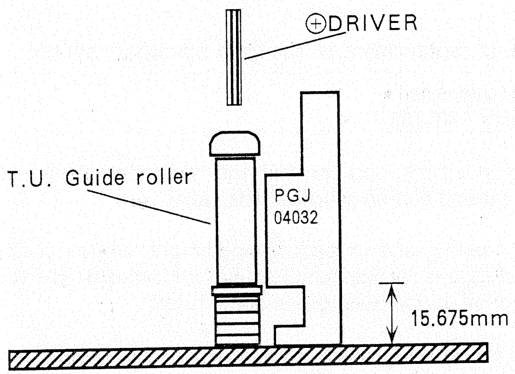

⊕DRIVER
T.U. Guide roller
PGJ
04032
15.675mm

Fig.2-7-3 Ttake-up guide roller height

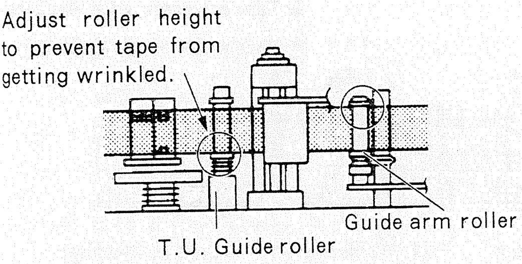

Adjust roller height
to prevent tape from
getting wrinkled.
Guide arm roller
T.U. Guide roller

Fig.2-7-4 Tape transport check

(1) **Required implements**
- **Height gauge** : PGJ04032
- **Thin tape** : ST-180

(2) Set the height gauge on the main deck and check the height of the upper surface of the lower flange of the guide roller.

(3) If it needs adjustment, adjust the height of the guide roller by turning the setscrew on the top of the guide roller.

(4) Transporting a thin tape in the Play, Search FWD and Play modes in this order, check and adjust the height of the guide roller so that the tape is not wrinkled nor damaged at the lower flange of the guide roller. However, do not turn the setscrew more than 3/4 turn from the position that is set in the step (3).

(5) Again check the tape running smoothly.

4 Guide arm roller height adjustment

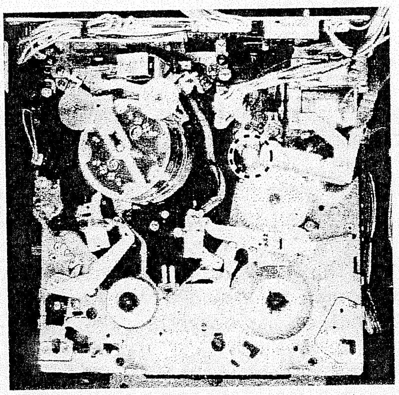


Fig.2-7-5

(1) **Required implements**
- **Height gauge** : PGJ04032
- **Hex. driver** : PGJ04034
- **Hex. key** : 0.9mm
- **Thin tape** : ST-180

(2) Turn off the power.

(3) As shown in the dotted circle, set the height gauge on the main deck's cutout neighboring the capstan motor in the right side.

(4) Turn the loading motor counterclockwise by hand while checking the height of the lower surface of the upper flange of the guide arm roller.

(5) If adjustment is needed, turn the setscrew on the top of the guide arm roller to adjust its height.

(6) Transporting a thin tape in the FWD and REV modes, check that there is no change in the tape transport level at the lower flange of the take-up guide roller even when the mode is changed between the FWD and REV. (See Fig. 2-7-4.)

(7) If the tape is damaged or wrinkled, repeat the above steps (2) through (6) until that smooth tape transport is confirmed.

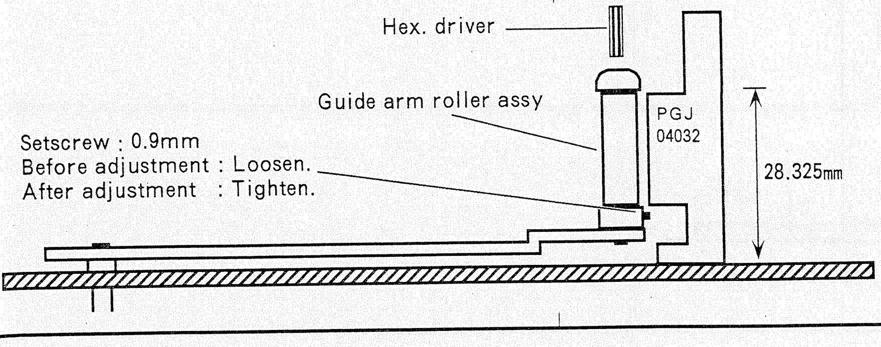

Hex. driver
Guide arm roller assy
Setscrew : 0.9mm
Before adjustment : Loosen.
After adjustment : Tighten.
PGJ
04032
28.325mm

Fig.2-7-6

SECTION 3
ELECTRICAL ADJUSTMENT

3. 1 PRECAUTIONS

Before proceeding to any electrical adjustment, it is the first prerequisite to confirm that the objective item is out of order or of breakdown. Moreover, for parts and items that need correct mechanical adjustment prior to electrical adjustment, begin by confirming that they are exactly mechanically adjusted.
Make sure to start electrical adjustment 5 or more minutes after the power is turned on.

3.1.1 Required tools and test instruments

- Frequency counter (sensitivity range between 10MHz or more and 100mV or less)
- Video signal generator
  (TG-7／1, Model 1410, PGJ05003, or equivalent)
- Waveform monitor (1485R, or equivalent)
- Digital voltmeter (available for 1 mV DC or under)
- Sweep signal generator
  (100kHz to 10MHz, Model-430, or equivalent)
- Oscilloscope
  (dual-trace type, available for 50MHz or more)
- Vectorscope (520A, or equivalent)
- TV monitor
- Audio tester

Besides the above-mentioned instruments, the following special instruments are needed.

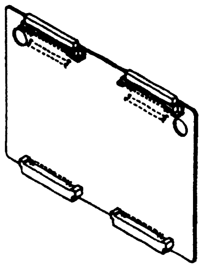
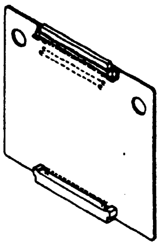
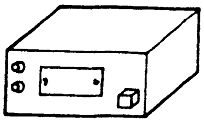
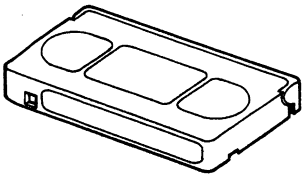
Extension boards		Carrier checker
1. PGJ05043 for VIDEO-1, VIDEO-2, FM AUDIO, NORMAL AUDIO, AV I／O boards 	2. PGJ05006 for SYSCON board 	PGJ05008 
Alignment tape		
3-2ページ参照 		

Fig.3-1-1 Required special implements

3.1.2 Specification of alignment tapes

- MHP

Video signal	Audio signal	Application	Remark
VHS (SP mode) Stairstep	7kHz	•For check and adjustment of interchangeability. •For adjustment of PB switching point.	MH-1 stairstep signal is substitutable.

- MHV-2

Video signal	Audio signal	Application	Remark
VHS (SP mode) Color bar	–	•For check and adjustment of video PB circuit.	MH-1 color bars signal is substitutable.

- MBA(MHA)

Video signal	Audio signal	Application	Remark
CTL signal only	1kHz(0dB)	•For check and adjustment of audio PB circuit.	MH-1 1 kHz signal is substitutable.

- MH-6

No.	Play-Back time	Video signal	Audio signal	Application
1	2 minutes	Color sweep	400Hz(−20dB)	•For check and adjustment of frequency response of video PB circuit. •For check and adjustment of frequency response of audio PB circuit.
2	2 minutes	Color sweep	100Hz(−20dB)	
3	2 minutes	Color sweep	10kHz(−20dB)	
4	4 minutes	Color sweep	–	

- MH-F6

No.	Play-Back time	Video signal	Audio signal	Application
1	5 minutes	–	Carrier only	For check and adjustment of interchangeability of mechanism.
2	5 minutes	Stairstep	Carrier only	
3	5 minutes	–	1kHz (±50kHz DEV)	For check and adjustment of FM audio PB circuit.

- MHV-2H

Video signal	Audio signal	Application	Remark
S-VHS (SP mode) Color bar	–	•For check and adjustment of video PB circuit.	MH-1H SP mode color bar signal is substitutable.

- MBV-3H

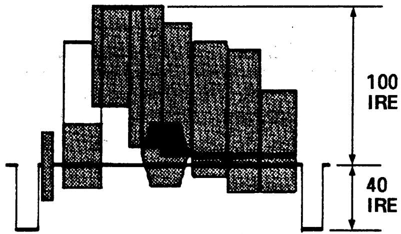
Video signal	Audio signal	Application	Remark
S-VHS (SP mode) Sweep signal	–	•For check and adjustment of video frequency response.	MHV-3H is renamed.

- MBAF-3

Video signal	Audio signal	Application	Remark
Carrier only (4MHz)	1KHz (±50KHz DEV)	•For check and adjustment of FM audio PB circuit.	–

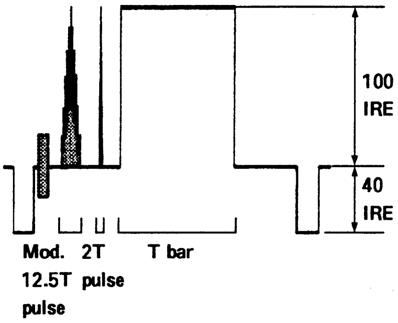
3.1.3 Signals required for video system adjustment

(1) **EIA Color bar signal (75%, setup at 7.5%)**

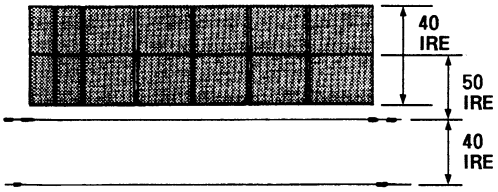


All color levels appearing in this section are measured or to be measured with this color bars signal.
If another color bars signal such as of 100 % color level is used, it brings on different measurement results.

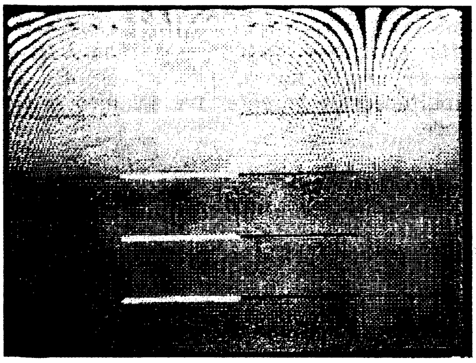
(2) **Pulse & bar signal**



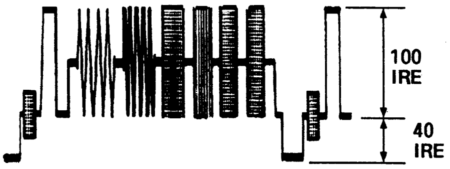
(3) **Video sweep signal (100k to 5MHz)**



To input this signal through the LINE IN terminal, make sure to use a sweep signal well-balanced in H. correlation in order to avoid malfunction of the comb filters.
For a reference, a sweep signal having a good H. correlation shows such a clear pattern as neighboring black and white lines are the same in the width and interval on the monitor screen as shown in the figure below.

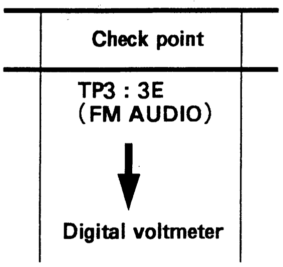


(4) **Multi-burst signal**



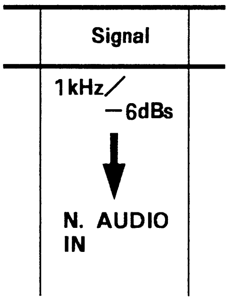
3.1.4 Explanation of main columns in check and adjustment table.

(1) **"Check Point" column**



The Check Point column indicates measuring instruments to be used and test points to connect measuring instruments (use and connection of oscilloscope are omitted).
Symbol (consisting of numeral and alphabet) following the symbol of a test point and colon indicates a section of the specified board where the test point is located.
In case of the above sample, TP3 is located in the section 3E of the FM AUDIO board, and TP3 should be connected with a digital voltmeter.
When a terminal on the rear board is indicated in the Check Point column, connect a measuring instrument directly to the terminal.

(2) **"Signal" column**

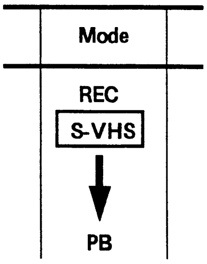


The Signal column indicates signals to input and terminals to input the signal. (When no input terminal is indicated, input signal through the LINE IN terminal.)

Note:
When the Y/C358 terminal is specified as an input terminal, set the VIDEO INPUT switch on the front panel to the Y/C358 position.

In case of the above sample, input a 1 kHz, -6 dBs signal through the NORMAL AUDIO INPUT terminal.
When adjustment requires to play back an alignment tape to supply input signal, the part number of a required alignment tape is indicated in this column.

(3) **"Mode" column**



The Mode column indicates operation modes for adjustment.
The above sample indicates to play back a tape that is recorded in the S-VHS mode for adjustment.

3. 2 SERVO CIRCUIT

The test point of D-F.F. output is TP102(:7G) on the 1 2 AV PRE/REC board.

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
1	**Duty factors of FG pulses & Stop servo (automatic adjustment)**	—	—	—	Adjust mode "0 4"	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Press the MENU (+) or SET (−) button to set for the adjustment mode No. "04". (3) Press the COUNTER RESET button and the reel motor, capstan motor and drum motor take turns at rotating to perform automatic adjustment. (4) With completion of the automatic adjustment, every motor stops and "End" appears in the counter display.
2	**Switching point**	TRACKING METER	TRACKING VR	MHP	Adjust mode "0 F"	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Press the MENU (+) or SET (−) button to set for the adjustment mode No. "0F". (3) Play back the MHP alignment tape while adjusting the TRACKING VR so that the TRACKING METER reads the signal level to the maximum. (4) Press the COUNTER RESET button and automatic adjustment starts. (5) With completion of the automatic adjustment, every motor stops and "End" appears in the counter display.
3	**EP Tracking**	TP101 : 8F (AV PRE/REC)	TRACKING VR	MHP-L	Adjust mode "1 0"	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Press the MENU (+) or SET (−) button to set for the adjustment mode No. "10". (3) Play back the MHP-L alignment tape. (4) With the MHP-L tape being played, adjust the TRACKING VR to maximize signal level at TP101 (FM waveform). ***Note:*** ***Trigger the oscilloscope with a signal of TP102(:7G) on the AV PRE/REC board. (⊕ SLOPE)*** (5) Press the AUTO MODE switch and the resultant data is set in the memory.

3. 3 AUDIO CIRCUIT

3.3.1 Manual adjustment

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
1	**Hi-Fi audio carrier frequency**	TP1 : 7A (FM AUDIO) ↓ Frequency counter	VR57 : 7A (FM AUDIO)	No signal input	REC VHS	(1) Set the MENU switch No. 200 to "ON" position. (2) Adjust VR57 to obtain 1.300 MHz as the frequency of TP1 signal.
		L-ch carrier frequency : 1.300±0.002MHz				
		TP2 : 7A (FM AUDIO) ↓ Frequency counter	VR58 : 8A (FM AUDIO)	No signal input	REC VHS	(3) Adjust VR58 to obtain 1.700 MHz as the frequency of TP2 signal.
		R-ch carrier frequency : 1.700±0.002MHz				
2	**Conduct automatic adjustment of the AUDIO circuit. (See the following page for detail.)** **To conduct automatic adjustment of the audio circuit, proceed as follows.** • **After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons at the same time.** • **"00 00" appears in the counter display.** • **Insert a required tape.** • **Press the MENU (+) or SET (−) button to select an automatic adjustment mode by number.** • **Press the COUNTER RESET button and automatic adjustment starts with indication of "P" in the counter display.** • **As the automatic adjustment finishes, the tape is automatically ejected and "End" appears in the counter display.** ***Note : When "Error" is displayed, no adjustment is performed and the previous adjustment data is recovered.***					
3	**Hi-Fi AUDIO LEVEL METER**	HiFi AUDIO OUT (600Ω terminator) ↓ Audio level meter	R107 : 10G (Lch) R108 : 9G (Rch) (AV I/O)	1kHz/ −6dBs ↓ HiFi AUDIO IN	E-E	(1) With the HiFi REC LEVEL VR adjust the output from the HiFi AUDIO output terminal to be −6.0 (±0.3)dBs. (2) Set the AUDIO MONITOR switch to the HiFi position. (3) Set the METER SELECT switch to the AUD-2 position. (4) Adjust R107 (for L-ch) and R108 (for R-ch) so that the AUDIO LEVEL METER reads 0.0dB as viewed from the right front. ***Note:*** ***For adjusting the BR-S500 in this item, play back the alignment tape MBAF-3 or the 1kHz segment of MH-F6 tape.***

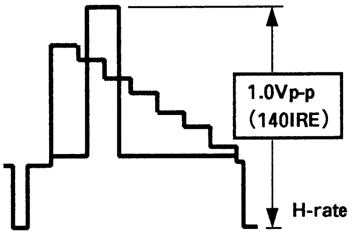
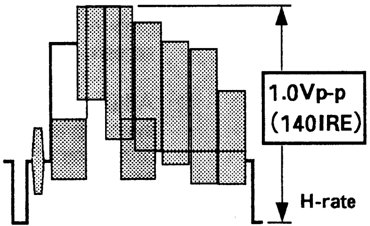
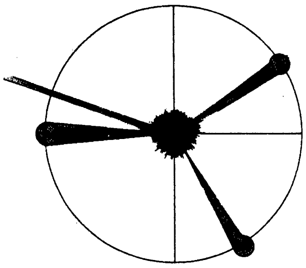
3.3.2 Automatic adjustment

No.	Item	Check point	Adjust-ment	Tape "A"	Mode "B"	Check and Adjustment
1	**Normal Audio PB level**	–	–	MBA	Adjust mode "1 8"	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Load the set with the specified tape and press the MENU (+) or SET (–) button to select the adjustment mode No."B". (3) Press the COUNTER RESET button and automatic adjustment starts with indication of "P" in the counter display. (4) With completion of the automatic adjustment, the tape is automatically ejected and "End" appears in the counter display.
2	**Normal Audio PB frequency response**	–	–	MH-6	Adjust mode "1 9"	
3	**Hi-Fi Audio PB level**	–	–	MH-F6 (1kHz) or MBAF-3	Adjust mode "1 A"	
4*	**BR-S800 Normal Audio REC/PB level**	–	–	S-VHS DC	Adjust mode "1 B" S-VHS	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Load the set with an S-VHS cassette tape and press the MENU (+) or SET (–) button to select the adjustment mode No."1B". (3) Press the COUNTER RESET button. (4) With completion of the automatic adjustment, the tape is automatically ejected and "End" appears in the counter display.
				VHS DC	Adjust mode "1 B" VHS	(5) Change the tape with a VHS cassette tape and proceed to do the same adjustment for the VHS mode as for the S-VHS mode carried out in the above steps.
5*	**BR-S800 Normal Audio frequency response (REC/PB)**	–	–	S-VHS DC	Adjust mode "1 C" S-VHS	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Load the set with an S-VHS cassette tape and press the MENU (+) or SET (–) button to select the adjustment mode No."1C". (3) Press the COUNTER RESET button. (4) With completion of the automatic adjustment, the tape is automatically ejected and "End" appears in the counter display.
				VHS DC	Adjust mode "1 C" VHS	(5) Change the tape with a VHS cassette tape and proceed to do the same adjustment for the VHS mode as for the S-VHS mode carried out in the above steps.
6*	**BR-S800 HiFi Normal Audio REC/PB level & EE level**	–	–	S-VHS DC	Adjust mode "1 D" S-VHS	(1) After turning on the power (within 2 sec), press the FF, REW and COUNTER RESET buttons simultaneously to enter the set into adjustment mode. (2) Load the set with an S-VHS cassette tape and press the MENU (+) or SET (–) button to select the adjustment mode No."1D". (3) Press the COUNTER RESET button. (4) With completion of the automatic adjustment, the tape is automatically ejected and "End" appears in the counter display.
				VHS DC	Adjust mode "1 D" VHS	(5) Change the tape with a VHS cassette tape and proceed to do the same adjustment for the VHS mode as for the S-VHS mode carried out in the above steps.

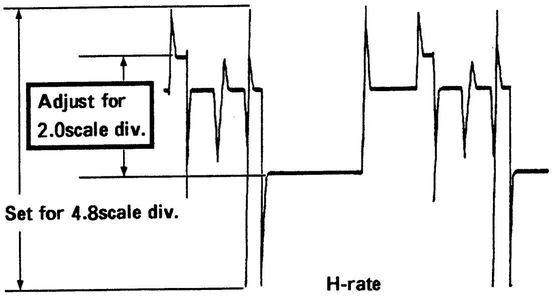
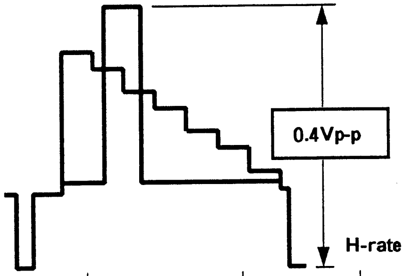
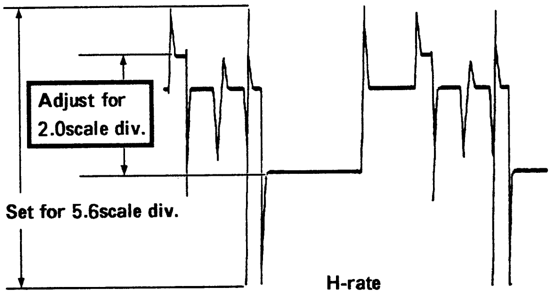
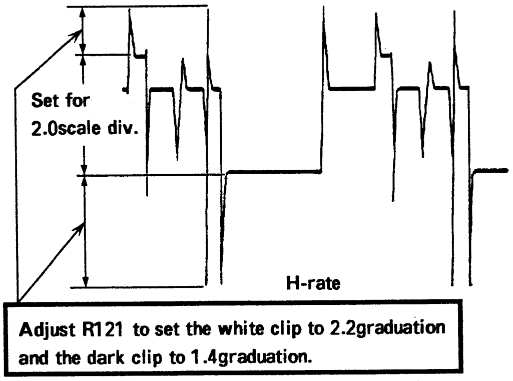
∗: ***Automatic adjustments of the above items No. 4, 5, 6 are provided for the recording system of the audio circuit. Although the above description is given to individual adjustment procedures of the those items, they can undergo automatic adjustment together with when the adjustment mode No."1E" is selected. (However, adjustments for the VHS and S-VHS modes must be conducted individually.)***

3. 4 VIDEO CIRCUIT

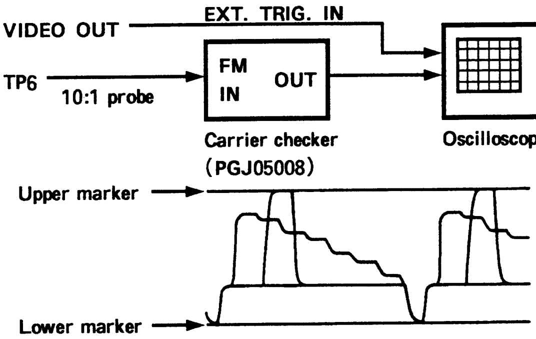
- ***The test point of D-F.F. output is TP102(:7G) on the [1][2] AV PRE/REC board.***

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
1	**VCXO**	TP4 : 11E (VIDEO-1) ↓ Frequency counter	C89 : 12E (VIDEO-1) **TP4 : 3.579545MHz±10Hz**	MHV-2H	PB	(1) Adjust C89 to obtain 3.579545MHz as the frequency of TP4's signal.
2	**BR-S800 AGC gain level**	Y/C358 •Y OUT (75Ω terminator)	R11 : 5G (VIDEO-1) 	Color bar ↓ Y/C358 •Y IN •C IN	E-E	(1) Set the VIDEO INPUT switch to the Y/C358 position. (2) Adjust R11 so that output level of the Y/C358 Y OUT terminals is 1.0Vp-p (140IRE).
3	**BR-S800 COMB filter level**	VIDEO OUT (75Ω terminator)	R33 : 8G (VIDEO-1) 	Color bar	E-E	(1) Adjust R33 so that output level of the VIDEO OUT terminal is 1.0Vp-p.
		VIDEO OUT (75Ω terminator) ↓ Vectorscope	R34 : 7G (VIDEO-1)  **Utilizing the radius of the vectorscope screen's circumference as a ruler, equalize burst level of output of the VIDEO OUT terminal with the input signal level with**	Color bar	E-E	(2) Input color bars signal directly to the vectorscope while adjusting its GAIN control to position the burst tip at the "0dG" point in the −(B-Y) axis on the vectorscope screen. (3) Next, connect the vectorscope to the VIDEO OUT terminal and input color bars signal through the VIDEO IN terminal. (4) In the condition of (3) above, adjust R34 so that burst level is equal to the value that is obtained in the previous step (2).

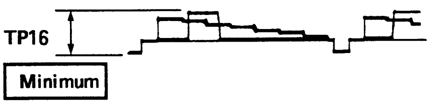
- *The test point of D-F.F. output is TP102(:7G) on the 1 2 AV PRE/REC board.*

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
4	**BR-S800 VHS mode White & Dark clip**	TP7 : 4E (VIDEO-2)  Adjust for 2.0scale div. Set for 4.8scale div. 	R146 : 2C (VIDEO-2)	Pulse & bar	E-E VHS	(1) Set the MENU switch No.100 to "VHS". (2) Adjust the oscilloscope's GAIN control to set the level difference between the white clip and the dark clip for 4.8scale divisions of the oscilloscope screen. (3) Adjust R146 so that the difference between the sync tip and the 100% white level is for 2.0scale divisions of the oscilloscope. ***Note :*** ***After the step (3), make sure that the level difference between the white clip and the dark clip is still for 5.0scale divisions.*** (4) Return the setting of the MENU switch No.100 to "AUTO".
5	**BR-S800 Sub emphasis input level**	TP2 : 6F (VIDEO-2)  	R41 : 5G (VIDEO-2)	Color bar	E-E	(1) Adjust R41 to obtain 0.4Vp-p as the signal level at TP2.
6	**BR-S800 S-VHS mode White & Dark clip**	TP7 :4E (VIDEO-2)  Adjust for 2.0scale div. Set for 5.6scale div. 	R31 : 8F (VIDEO-2)	Pulse & bar	E-E S-VHS	(1) Adjust the oscilloscope's GAIN control to set the level difference between the white clip and the dark clip for 5.6scale divisions of the oscilloscope screen. (2) Adjust R31 so that the difference between the sync tip and the 100% white level is for 2.0scale divisions of the oscilloscope. ***Note :*** ***After the step (2), make sure that the level difference between the white clip and the dark clip is still for 5.6scale divisions.***
		 Set for 2.0scale div. Adjust R121 to set the white clip to 2.2graduation and the dark clip to 1.4graduation.	R121 : 3F (VIDEO-2)	Pulse & bar	E-E S-VHS	(3) Adjust the oscilloscope's GAIN control to set the difference between the sync tip and the 100% white level is for 2.0scale divisions. (4) At the same time, adjust R121 to set the white clip to the graduation of 2.2 and the dark clip to the graduation of 1.4 of the oscilloscope scale.

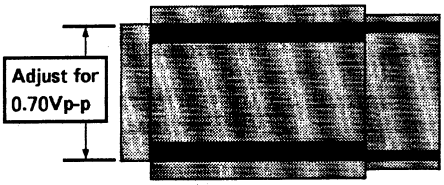
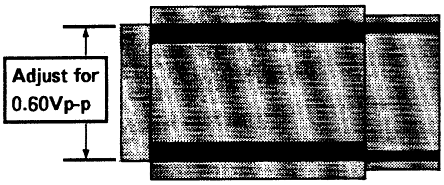
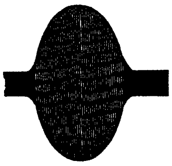
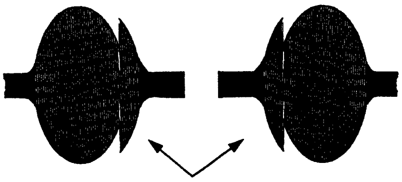
- *The test point of D-F.F. output is TP102(:7G) on the 1 2 AV PRE/REC board.*

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
7	**BR-S800 Carrier & Deviation**	TP6 : 7D (VIDEO-2)  VIDEO OUT EXT. TRIG. IN TP6 10:1 probe FM IN OUT Carrier checker (PGJ05008) Oscilloscope Upper marker Lower marker	R124 : 3F (Carrier) R132 : 4F (Deviation) (VIDEO-2)	Color bar	E-E S-VHS	***Note :*** ***This adjustment needs the carrier checker (PGJ05008).*** (1) Make sure that the MENU switch No.100 is set to "AUTO" position. (2) Connect the carrier checker and the oscilloscope as illustrated in the left. (3) Set the carrier checker for "S-VHS" mode and the DEVI/BAL switch to "DEVI" position. (4) Adjust R124 to accord the sync tip with the lower marker while adjusting R132 to accord the 100% white level with the upper marker. ***Note :*** ***The above adjustment requires that both the sync tip and the 100% white level accord with the marker respectively.***
			R126 : 5F (Carrier) R128 : 5F (Deviation) (VIDEO-2)	Color bar	E-E VHS	(5) Set the MENU switch No.100 to "VHS". (6) In the same manner as for the S-VHS mode, accord the sync tip with the lower marker with R126 and the 100% white level with the upper marker with R128 respectively. (7) Return the MENU switch No.100 to "AUTO".

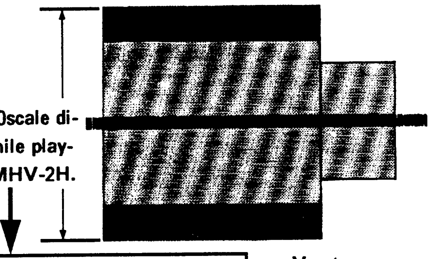
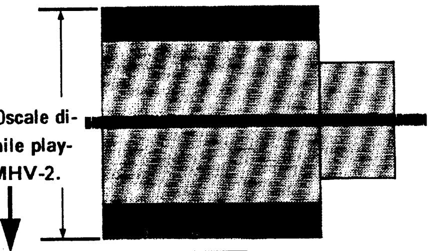
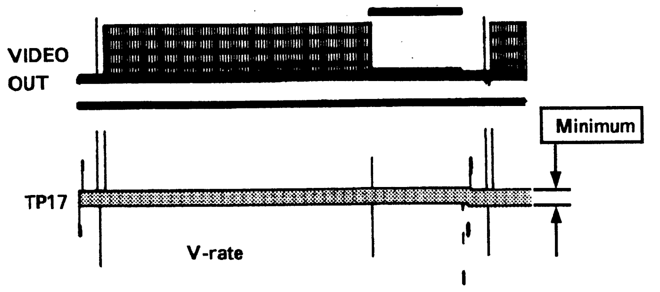
Mode	CARRIER		DEVIATION
	Sync-tip	100%White	
S-VHS	5.4MHz	7.0MHz	1.6MHz
VHS	3.4MHz	4.4MHz	1.0MHz

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
8	**YNR NC balance (DOC Y level)**	TP16 : 2D (VIDEO-2) 	R12 : 15C (VIDEO-2)	Color bar	E-E S-VHS	(1) Minimize the level of TP16 signal with R12. ***Note:*** ***When the BR-S500 needs this adjustment, play back the alignment tape MHV-2H since it is equipped with no INPUT terminal.***

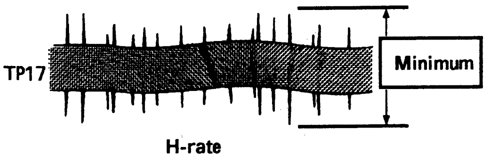
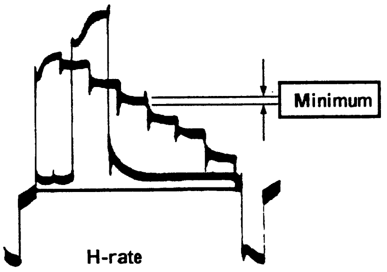
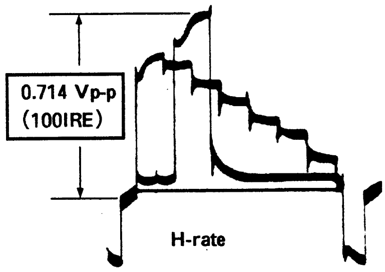
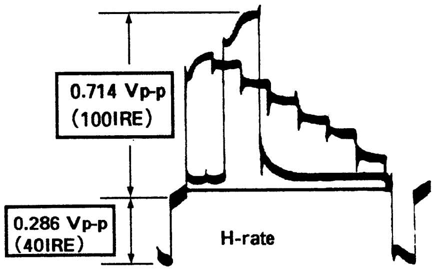
- ***The test point of D-F.F. output is TP102(:7G) on the $\boxed{1}\boxed{2}$ AV PRE/REC board.***

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
9	**BR-S800 REC FM level**	TP6 : 7D (VIDEO-2)  TRIG : D-FF ⊖SLOPE(CH1) ⊕SLOPE(CH2)	R63 : 6B (VIDEO-2)	Color bar	REC S-VHS	(1) Readjust R63 to obtain 0.70Vp-p as the level of TP6's FM waveform.
		 TRIG : D-FF ⊖SLOPE(CH1) ⊕SLOPE(CH2)	R81 :7C (VIDEO-2)	Color bar	REC VHS	(1) Readjust R81 to obtain 0.60Vp-p as the level of TP6's FM waveform.
10	320f$_H$ VCO	TP11 : 14E (VIDEO-1)  – OK –  – NG –	R147 : 12E (VIDEO-1)	MHV-2H	PB	(1) Adjust R147 so that TP11's waveform becomes the same as the top (OK) figure on the left.

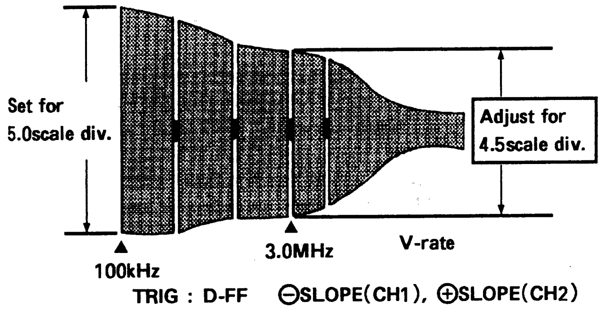
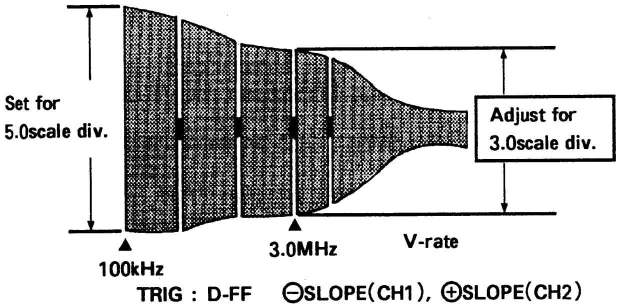
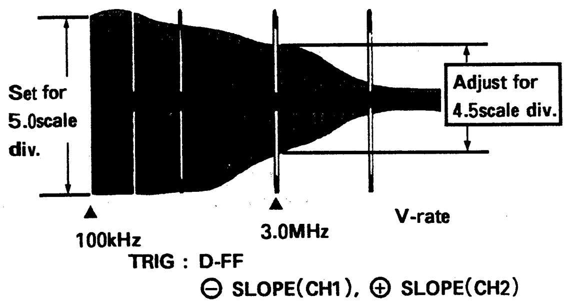
- *The test point of D-F.F. output is TP102(:7G) on the* **1̲2̲** *AV PRE/REC board.*

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
11	**BR-S800 REC color level**	TP5 : 10B (VIDEO-2)  **Set for 4.0scale divisions while playing back MHV-2H.** **Set for 5.0 scale divisions while playing back self-recorded tape.** **V-rate** **TRIG : D-FF**	–	MHV-2H	PB	(1) Play back the MHV-2H alignment tape. ***Note :*** ***Set the TRACKING VR to the optimum position.*** (2) Adjust the GAIN control of the oscilloscope to set color level at TP5 for 4.0scale divisions of the oscilloscope. ***Note :*** ***If there is a level difference in channels, adjust it by the higher channel. (REC/PB mode)***
			R54 : 7B (VIDEO-2)	Color bar	REC S-VHS ↓ PB	(3) Record color bars signal and play it back. (4) Adjust R54 so that output level at TP5 becomes for 5.0scale divisions on the oscilloscope (+2.0dB to the alignment tape). ***Note :*** ***R54 should be adjusted in recording. Counterclockwise turning of R54 increases the level.***
		 **Set for 4.0scale divisions while playing back MHV-2.** **Set for 3.6 scale divisions while playing back self-recorded tape.** **V-rate** **TRIG : D-FF**	–	MHV-2	PB	(1) Play back the MHV-2H alignment tape. ***Note :*** ***Set the TRACKING VR to the optimum position.*** (2) Adjust the GAIN control of the oscilloscope to set color level at TP5 for 4.0scale divisions of the oscilloscope. ***Note :*** ***If there is a level difference in channels, adjust it by the higher channel. (REC/PB mode)***
			R72 : 8C (VIDEO-2)	Color bar	REC VHS ↓ PB	(3) Record color bars signal and play it back. (4) Adjust R72 so that output level at TP5 becomes for 3.6scale divisions on the oscilloscope (−1.0dB to the alignment tape). ***Note :*** ***R72 should be adjusted in recording. Counterclockwise turning of R72 increases the level.***
12	**ΔY (Non-correlated pulse)**	TP17 : 15A (VIDEO-2)  	R273 : 11C (VIDEO-2)	Color bar	REC VHS ↓ PB	(1) Observing the waveform of TP17's signal, adjust R273 to minimize the level shown in the figure. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has no INPUT terminal.***

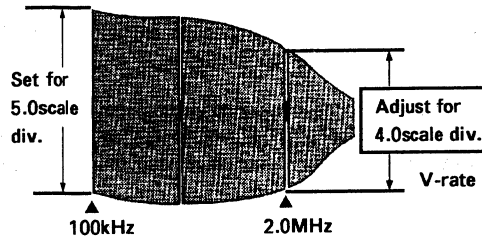
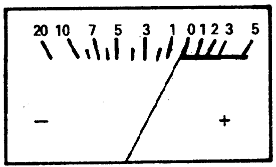
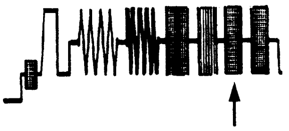
• The test point of D-F.F. output is TP102(:7G) on the 1 2 AV PRE/REC board.

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
13	**PB Y COMB-1**	TP17 : 15A (VIDEO-2) 	R243 : 13D (VIDEO-2)	Color bar	REC VHS ↓ PB	(1) Adjust R243 to minimize the level of TP17's signal. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has no INPUT terminal.***
14	**PB Y COMB-2**	TP24 : 15E (VIDEO-2) 	R279 : 11D R389 : 14E (VIDEO-2)	Color bar ↓ TP23:10B (VIDEO-2)	E-E	(1) Shortcircuit between TP21(:10B) and TP22(:11B) on the VIDEO-2 board with a shorting wire. (2) Input color bars signal (2Vp-p) to between TP23(:10B) and TP-GND8(:9B) on the VIDEO-2 board. (3) Adjust R279 and R389 alternately to minimize chroma leak at TP24. (4) After the adjustment, remove the shorting wire from TP21 and TP22.
15	**PB Y level**	Y/C 358 •Y OUT (75Ω terminator) 	R171 : 4G (VIDEO-2)	Color bar	REC VHS ↓ PB	(1) Observing output of the Y/C358 Y OUT terminal, adjust R171 so that the difference between the 100% white level and the pedestal level is 0.714Vp-p (100IRE). ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has no INPUT terminal.***
			R174 : 3G R252 : 14G (VIDEO-2)	Color bar	REC S-VHS ↓ PB	(2) Observing output of the Y/C358 Y OUT terminal, adjust R174 so that the difference between the 100% white level and the pedestal level is 0.714Vp-p (100IRE). (3) Adjust R252 so that the sync level becomes 0.286Vp-p (40IRE). ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has no INPUT terminal.***

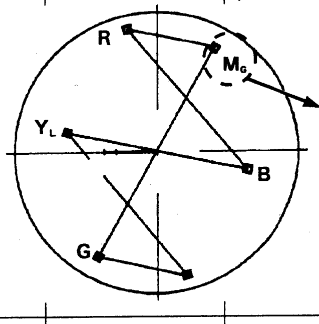
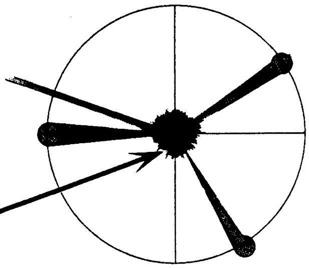
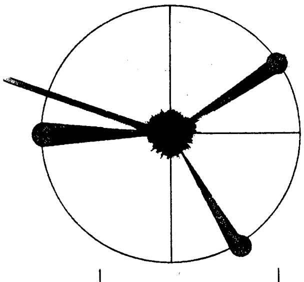
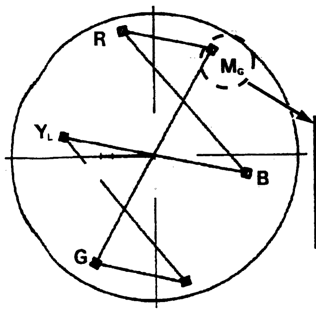
- *The test point of D-F.F. output is TP102(:7G) on the 1 2 AV PRE/REC board.*

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
16	**S-VHSmode RF equalizer**	VIDEO OUT (75Ω terminator)	R212 : 13G (CH1) R213 : 13G (CH2) (VIDEO-2)	MBV-3H	PB S-VHS	(1) Make sure that the MENU switch No.101 is set to "DUB or EDIT". (2) Play back the MBV-3H alignment tape and adjust the TRACKING VR to the optimum position. (3) Observing the 100kHz signal level on the oscilloscope, adjust the oscilloscope's GAIN control to set it for 5.0scale divisions. (4) In the above-mentioned condition, adjust R212 (CH1) and R213 (CH2) so that the 3MHz signal level becomes for 4.5scale divisions (−1.0 dB) respectively.
	 Set for 5.0scale div. Adjust for 4.5scale div. 100kHz 3.0MHz V-rate TRIG : D-FF ⊖SLOPE(CH1), ⊕SLOPE(CH2)					
			R218 : 12G (CH1) (VIDEO-2)	Sweep (nonburst)	REC S-VHS ↓ PB	***Note :*** ***This set has no function of EP recording. Therefore, use a sweep signal recorded by the BR-S925 for adjusting this set in this item.*** (5) Record a sweep signal in the S-VHS 6H mode by the BR-S925. (6) Play back the signal recording in the above step (5) in the EP mode by this set. (7) Observing the playback sweep signal, set it for 5.0scale divisions on the oscilloscope. (8) Adjust R218 so that the 3.0MHz signal level becomes for 3.0scale divisions. ***Note :*** ***If there is a level difference in channels, use the lower level for adjustment.***
	 Set for 5.0scale div. Adjust for 3.0scale div. 100kHz 3.0MHz V-rate TRIG : D-FF ⊖SLOPE(CH1), ⊕SLOPE(CH2)					
17	**BR-S800 REC frequency response**	VIDEO OUT (75Ω terminator)	C194 : 2G (CH1) C193 : 3G (CH2) (VIDEO-2)	Sweep (nonburst) ↓ Y/C 358 •Y IN	REC S-VHS ↓ PB	(1) Record a sweep signal and play it back. (2) Set the 100kHz signal level for 5.0scale divisions on the oscilloscope screen, and adjust C194 (CH1) and C193 (CH2) so that the 3.0MHz signal level becomes for 4.5scale divisions (−1.0 dB) respectively.
	- REC/PB mode -  Set for 5.0scale div. Adjust for 4.5scale div. 100kHz 3.0MHz V-rate TRIG : D-FF ⊖ SLOPE(CH1), ⊕ SLOPE(CH2)					

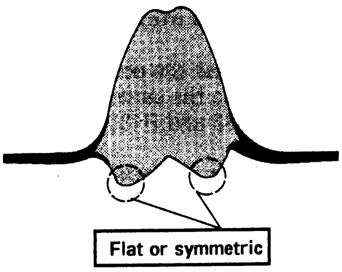
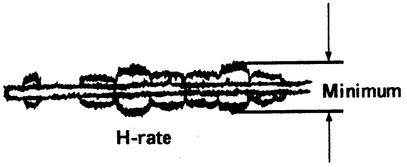
• *The test point of D-F.F. output is TP102(:7G) on the* 1 2 *AV PRE/REC board.*

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
18	**VHS mode RF equalizer**	VIDEO OUT (75Ω terminator)	R188 : 11G (CH1) R189 : 11G (CH2) (VIDEO-2)	Sweep (nonburst) ↓ Y/C 358 •Y IN	REC VHS ↓ PB	(1) Make sure that the MENU switch No.101 is set to "DUB or EDIT". (2) Record a sweep signal and play it back. (3) Adjust the GAIN control of the oscilloscope to set the 100kHz signal level for 5.0scale divisions on the oscilloscope screen. (4) In the above condition, adjust R188 (CH1) and R189 (CH2) so that the 2MHz signal level is for 4.0scale divisions (−2.0dB) respectively. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MH-6 alignment tape since it has no INPUT terminal.***
	 Set for 5.0scale div. Adjust for 4.0scale div. V-rate 100kHz 2.0MHz			TRIG : D-FF ⊖ SLOPE(CH1), ⊕ SLOPE(CH2)		
19	**Tracking meter**	TRACKING METER	R86 : 9F (VIDEO-2)	Color bar	REC S-VHS ↓ PB	(1) Set the METER SELECT switch to "TRACKING", and make sure that the TRACKING VR is set to the center click position. (2) Record a color bars signal and play it back. (3) Adjust R86 so that the pointer of the TRACKING METER indicates 0 as viewed from the right front. ***Note :*** ***For adjusting the BR-S500 in this item, record a color bars signal by the BR-S800 and play it back by the BR-S500 since the latter has equipped with no INPUT terminal. Moreover, make sure to set the TRACKING VR to an optimum position.***
						
20	**Logical COMB**	TP12 : 15D (VIDEO-1)	R166 : 13G R259 : 14G (VIDEO-1)	Multi burst ↓ TP8:15A (VIDEO-1)	PB (MBV-3H)	(1) Shortcircuit between TP9(:9F) and TP10(:13B) on the VIDEO-1 board with a shorting wire. (2) Input a multi-burst signal (2.0Vp-p) to between TP8 and TPGND on the VIDEO-1 board. (3) Set SW1(:15D) on the VIDEO-1 board to "ADJ". (4) Shortcircuit between TP6(:14F) and TPGND on the VIDEO-1 board with a shorting wire. (5) Play back the MBV-3H alignment tape. (6) Observing waveform of TP12's signal, adjust R166 and R259 alternately to minimize the level of the 3.58MHz segment. ***Note :*** ***Since the 3.58MHz signal segment differently appears depending on the signal generator, make sure to learn the specifications of the signal generator to be used beforehand.***
			Minimize the level of the 3.58MHz segment			
			R164 :14G R258 : 15G (VIDEO-1)	Multi burst ↓ TP8	PB (MBV-3H)	(7) Remove the shorting wire from TP6 and TPGND. (8) Play back the MBV-3H alignment tape. (9) Observing waveform of TP12's signal, adjust R164 and R258 alternately to minimize the level of the 3.58MHz segment. ***Note :*** ***Since the 3.58MHz signal segment differently appears depending on the signal generator, make sure to learn the specifications of the signal generator to be used beforehand.*** (10) Remove the shorting wire from TP9 and TP10, and return the setting of SW1 to "NOR".

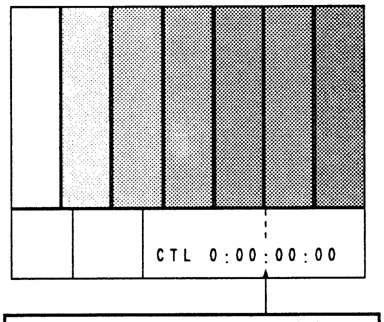
- ***The test point of D-F.F. output is TP102(:7G) on the $\boxed{1}\boxed{2}$ AV PRE/REC board.***

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
21	**CNR**	TP7 : 14D (VIDEO-1)  **Adjust the level and phase of the magenta so that they are constant despite of setting of the memory switch No.101 to "DUB" or "OFF".**	R156 : 13D R159 : 13D (VIDEO-1)	MHV-2H	PB	(1) Make sure that the MENU switch No.101 to "DUB or EDIT". (2) Take note of the position of magenta luminous dot on the vectorscope. (3) Set the MENU switch No.101 to "OFF (PB)". (4) Adjust the position of the magenta luminous dot to be the same as that in the above step (2) with R156 and R159 (5) After the adjustment, return the MENU switch No.101 to "DUB or EDIT" position.
22	**Carrier balance**	VIDEO OUT (75Ω terminator) ↓ Vectorscope  **Collect luminescent spots in the center of waveform in the center of vectorscope with R219 and R220.**	R219 : 10G R220 : 11G (VIDEO-1)	MHV-2H	PB	(1) Connect the vectorscope to the VIDEO OUT terminal. (2) Adjust R219 and R220 alternately to collect luminescent spots appearing in the center of the waveform in the center of the vectorscope screen.
23	**Color (burst) level & phase**	VIDEO OUT (75Ω terminator) ↓ Vectorscope  **Utilizing the radius of the vectorscope screen's circumference as a ruler, adjust R217 to equalize the playback burst level of the self-recorded signal with the burst level of the directly input color bars signal.**	R217 : 12G (burst) (VIDEO-1)	Color bar	REC S-VHS ↓ PB	(1) Input a color bars signal directly to the vectorscope (with 75Ω terminator) while adjusting the vectorscope's GAIN control to position the luminescent spot of the burst signal at the 0dG point in the −(B-Y) axis on the vectorscope screen. (2) Connect the vectorscope's channel that the gain is adjusted in the above step (1) and the VIDEO OUT terminal with each other. (3) Record a color bars signal and play it back. (4) Adjust R217 to position the luminescent spot of the burst signal at the 0 dG point on the vectorscope. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has equipped with no INPUT terminal.***
		 **Alternately adjust R221 and R208 to position luminescent spot in the ⊞ mark.**	R221 : 11G (level) R208 : 10G (phase) (VIDEO-1)	Color bar	REC S-VHS ↓ PB	(5) Adjust the vectorscope's GAIN control to return the luminescent spot of the burst signal to the original position. (6) Alternately adjust R221 (LEVEL) and R208 (PHASE) to position the luminescent spot of the magenta in the ⊞ mark on the vectorscope screen. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has equipped with no INPUT terminal.***

- *The test point of D-F.F. output is TP102(:7G) on the [1][2] AV PRE/REC board.*

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
24	**PB Y/C delay**	Y/C 358 OUT (75Ω terminator)  	R201 : 9G (VIDEO-1)	Pulse & bar	REC S-VHS ↓ PB	(1) Mix output signals of the Y/C358 Y OUT and the Y/C358 C OUT terminals in the oscilloscope which is triggered by the output signal of the Y OUT terminal. (2) Record pulse & bar signal and play it back while adjusting R201 to symmetrize the modulated 12.5T pulse in the bottom. ***Note :*** ***For adjusting the BR-S500 in this item, record a pulse & bar signal by the BR-S800 and play it back by the BR-S500 since the latter has no INPUT terminal.***
25	**Color DOC**	Both end of L17(:14D) (VIDEO-1)  	R250 : 12D R253 : 12D (VIDEO-1)	MHV-2H	PB	(1) Connect the oscilloscope's CH1 with an end of L17 and CH2 with the other end of L17. (2) Inverse the CH2 signal and mix it with the CH1 signal. (3) Adjust R250 to minimize the output level of the mixed signal. (4) Adjust R253 to minimize the level moreover.
26	**Slow tracking**	TV monitor	TRACKING VR	Color bar	REC S-VHS ↓ PB ↓ SEARCH (×1/30)	(1) Turn off the power switch. (2) Depress the FF, REW and COUNTER RESET button at the same time while turning on the power switch again. (3) Press the MENU switch to get "03 00" appearing in the counter display. (4) Record a color bars signal, and play it back in the step slow mode at the speed of X1/30 (+0.03). (5) Press the +SHIFT button and adjust the TRACKING VR to eliminate noise from the monitor screen. (6) Press the AUTO MODE button and confirm that "03 End" is appearing in the counter display. (7) Turn off the power switch. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHP alignment tape since it has no INPUT terminal.***

- ***The test point of D-F.F. output is TP102(:7G) on the 12 AV PRE/REC board.***

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
27	**V lock**	TV monitor	TRACKING VR	Color bar	REC S-VHS ↓ PB ↓ STILL	(1) Record a color bar signal and play it back in the Still mode. (2) Observing the still picture on the monitor screen, adjust the TRACKING VR to minimize fluctuation of the picture. (3) Enter the set into the Stop mode. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has no INPUT terminal.***
28	**Onscreen**	MONI OUT ↓ TV monitor	C220 : 5E (AV I/O)  Adjust so that this colon (:) is positioned in the midpoint between the red and magenta bars.	Color bar	E-E	(1) Set the COUNTER switch to "CTL" position. (2) Connect the TV monitor to the MONITOR OUT terminal. (3) Adjust C220 so that this colon (:) is positioned in the midpoint between the red and magenta bars. ***Note :*** ***For adjusting the BR-S500 in this item, play back the MHV-2H alignment tape since it has no INPUT terminal.***
		TP205 : 5F (AV I/O) ↓ Frequency counter	C226 : 6E (AV I/O) **TP205 : 14.318±0.001MHz**	–	E-E	(1) As the set is in "eject" mode, turn off the power switch. (2) Turn on the power switch again, and press the EJECT and STOP buttons simultaneously within 2sec after the counter indicator is on. (3) When "OPEn" appears in the counter display, press the IN/+SHIFT button 11 times, and then "On-Adj" will appear in the counter display. (4) Adjust C226 to obtain 14.318MHz as the frequency of TP205's signal. (Ground: TPGND202: 4E)

3.5 POWER SUPPLY CIRCUIT

No.	Item	Check point	Adjustment	Signal	Mode	Check and Adjustment
1	**Regulator voltage**	TP2 (REGULATOR)	R74 (REGULATOR)	–	REC	(1) Adjust R74 so that voltage at TP2 is 5.30±0.05V_{DC}.
		TP1 (REGULATOR)	R41 (REGULATOR)	–	REC	(1) Adjust R41 so that voltage at TP1 is 12.50±0.05V_{DC}.

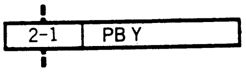
SECTION 4
DIAGRAMS AND CIRCUIT BOARDS

■ FOREWORD

1. Expression of connector

Connector is expressed in two ways.

1) The following illustrates 'CN2 pin 1' for example.



2) The following illustrates 'CN1 pins 1 and 2'.

CN1
1
2
[1][2] CN2
SYSCON

2. Expression of wiring

As the following circuit diagram is divided to print on some sheets, such an indication as the following is found in the case the wiring extends over two or more divided sections.

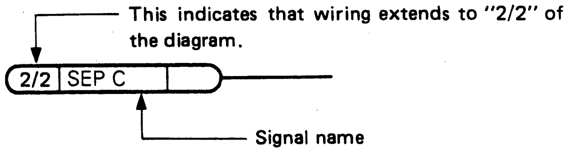
1) Circuit diagram divided into two or more sections:

Board No.	Board Name	Number of divided sections
10	VIDEO-1	2 (1/2~2/2)
11	VIDEO-2	2 (1/2~2/2)
12	AV PRE/REC	2 (1/2~2/2)
20	FM AUDIO	3 (1/3~3/3)
21	NORMAL AUDIO (BR-S800)	4 (1/4~4/4)
23	AV I/O	2 (1/2~2/2)
30	M-CTL/SERVO	2 (1/2~2/2)
—	OVERALL	2 (1/2~2/2)

2) Indication of wiring which extends to another section:

(Example)

On the "1/2" diagram of VIDEO-1 board, such an indication as the following is found on the "SEP C" signal line.



In the above case, the end of the wiring is connected to the "SEP C" on the 2nd section of the diagram.

3. Wiring of connector

(Example)

CN1
1
2
[1][2] CN2
SYSCON

In the above example, CN1 is connected with CN2 on [1][2] SYSCON board.

4. Signal flow on the diagram

The following arrow marks indicate the specified signal paths respectively.

➡ : RECORDING or EE signal path
⇨ : PLAYBACK signal path
➡ : REC/PLAY signal path

5. Measurement of voltage and waveform

1) Voltage
Measured by digital voltmeter in REC or PB mode.

2) Waveform
Video: Unless otherwise indicated, (a) color bars signal input through LINE IN terminal in REC in S-VHS mode, (b) color bars signal of MHV-2H alignment tape in PB.

6. Unit of value

Unless otherwise specified:

1) Resistance is in Ω (1/6 W)
2) Capacitance in μF
3) Inductance in μH
4) Screened parts (in ▨) are important for safety assurance. When replacing them, use specified parts.

4.1 REPLACING SUBMINATURE "CHIP" PARTS

1. General description

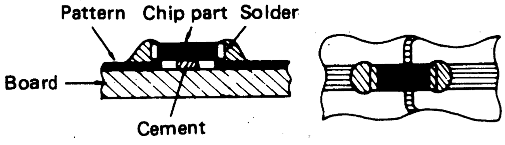
Some of resistors, variable resistors, shorting jumpers (0 Ω resistors), ceramic capacitors, transistors, diodes are chip parts. Those removed once cannot be used again.

2. Replacement of chip parts

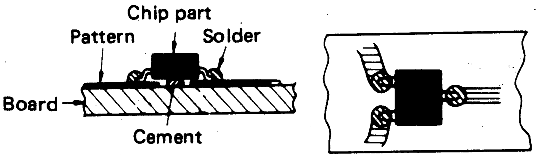
Replacement of chip parts should be performed as follows. Use a soldering iron (17 W for 260–30°C approx.) that has sharp-pointed tip and high performance in insulation.
It is more convenient to use a soldering iron with solder absorber (55 W approx.).

(1) Soldered condition of chip parts

- Resistors, capacitors, etc.



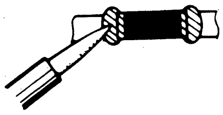
- Transistors, diodes, etc.



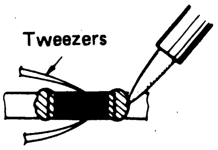
(2) Removing of chip parts

- Resistors, capacitors, etc.

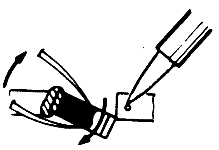
i) Melt solder at a side.



ii) Holding the chip with tweezers, melt solder at the other side.

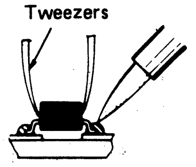


iii) Take off the chip in twisting and sliding motion.

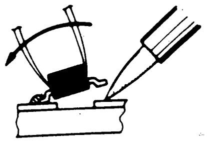


- Transistors, diodes, etc.

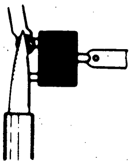
i) Melt solder at the side of single lead.



ii) Lift the unsolderd side upwards.



iii) Simultaneously melt solder at two leads of the other side and pull up the chip.

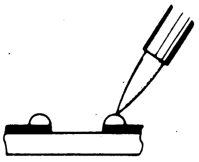


(3) Preheating and soldering of chip parts

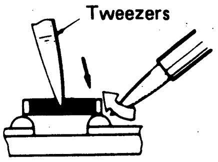
Except transistors, make sure to preheat all chip parts, capacitors in particular, with a hot wind of 150°C approx. (of a hair dryer, etc.) for 2 minutes just before soldering, and immediately solder by a soldering iron of approx. 30 W.

(4) Attaching of chip parts

i) Heap up a proper amount of solder beforehand.



ii) Holding down a new chip by tweezers, solder it to the board by a soldering iron to melt solder from its lower part to the upper part (in the direction shown by a big arrow).



Note:
- Don't heat chip parts over 3 seconds.
- Don't rub electrodes.
- Don't use chip parts which were once removed.
- No cement is required.

3. Shapes of transistors & diodes

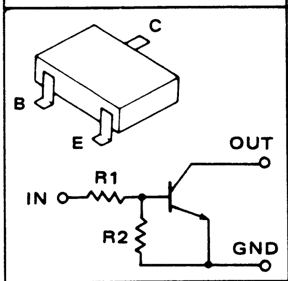
- **Transistors**

DTA124EK	2
DTA144EK	2
DTC114EK	1
DTC114YK	1
DTC144EK	1
DTC144EU	1
FMG2	3
FMS1	4
FMW1	5
IMX1	6
IMZ1	7
IMZ2	8
2SA1022C	9
2SB709	9
2SC2412K	9
2SC2778	9
2SC4081	9
2SD601/A	9
2SD602/A	9
2SK621	10

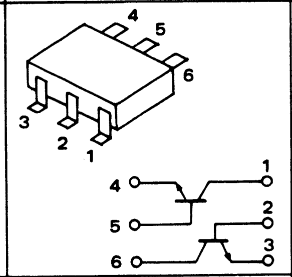
- **Diodes**

DAN202K	11
DAP202K	12
MA28WA	13
MA3056	13
MA3075	13

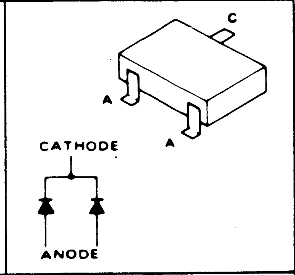
1


C
B
E
OUT
R1
IN
R2
GND

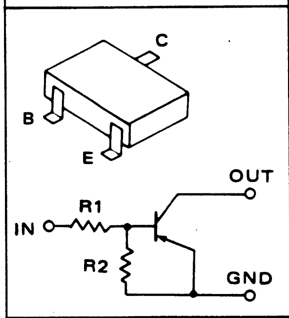
6


4
5
6
3
2
1
4
1
5
2
6
3

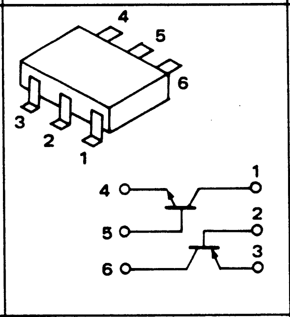
11


C
A
CATHODE
A
ANODE

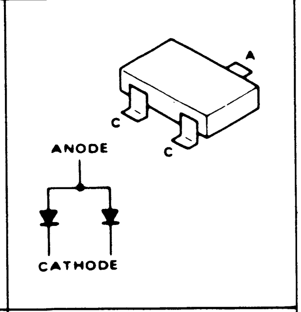
2


C
B
E
OUT
R1
IN
R2
GND

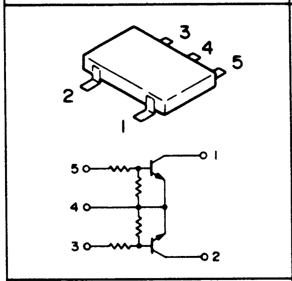
7


4
5
6
3
2
1
4
1
5
2
6
3

12


A
C
ANODE
C
CATHODE

3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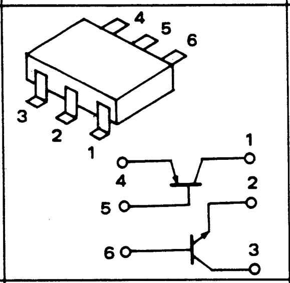
4
5
2
1
5
1
4
3
2

8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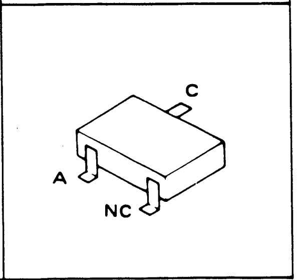
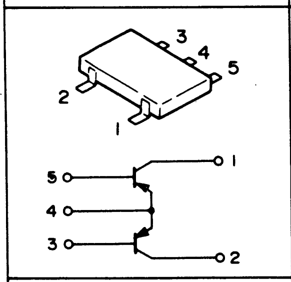
6
3
2
1
1
4
2
5
6
3

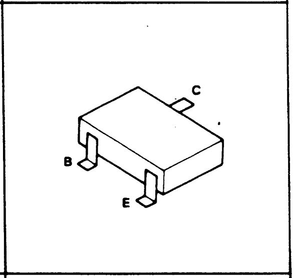
13



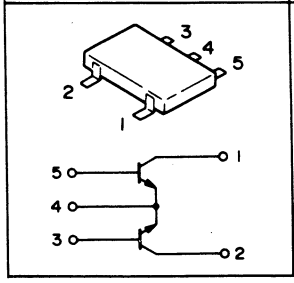
4


3
4
5
2
1
5
1
4
3
2

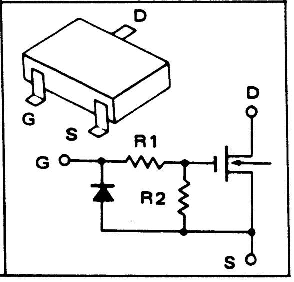
9



5


3
4
5
2
1
5
1
4
3
2

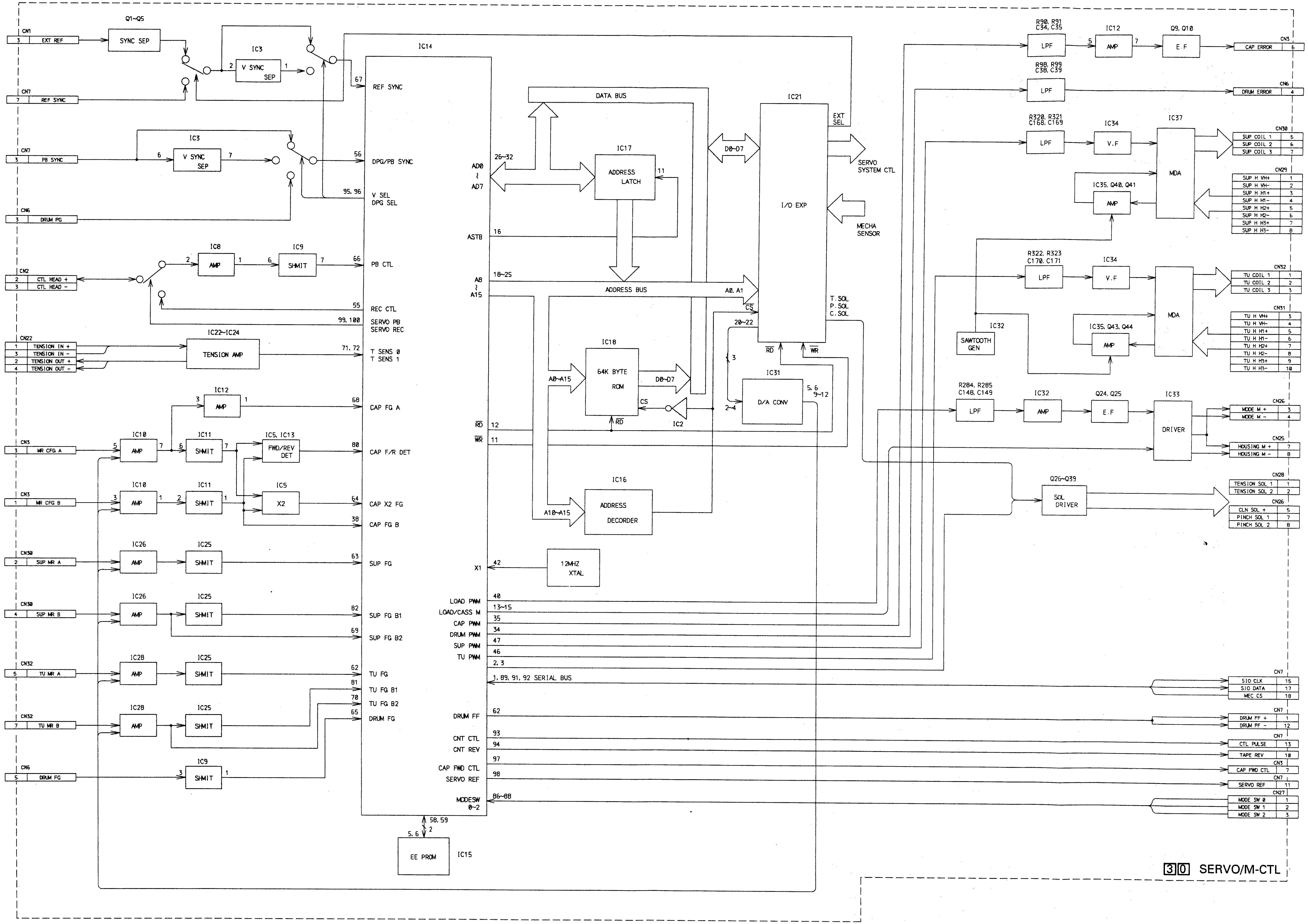
10


D
G
S
D
R1
G
R2
S

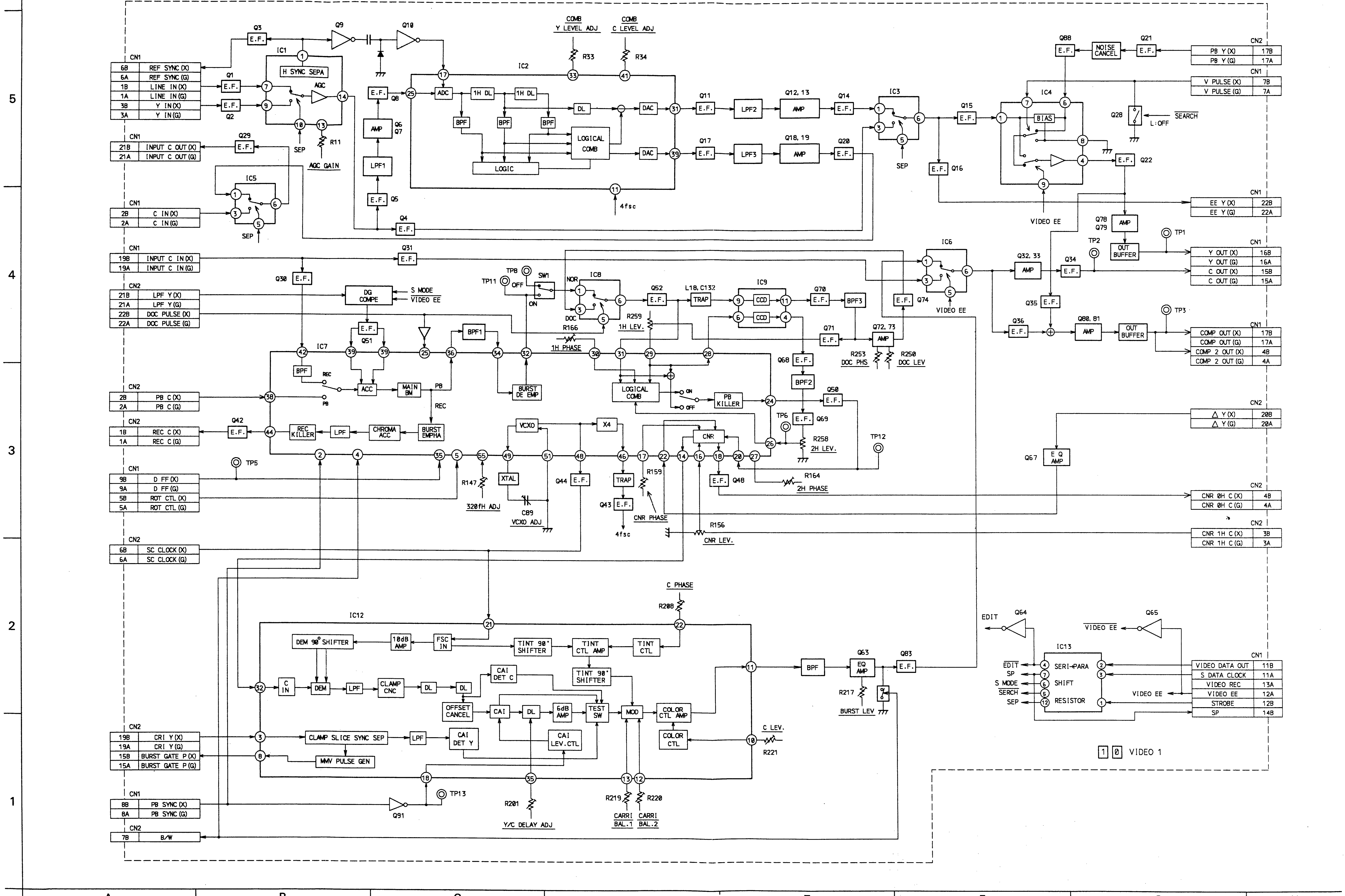
4.2 INDEX TO PAGES OF MAIN BOARDS

Board No.	Board Name	Page of diagram			
		Block diagram	Schematic diagram	Circuit board	Parts list
01	MOTHER-1	—	4-16	4-18	6-2
02	MOTHER-2	—	4-17	4-19	6-2
03	SLOT MOTHER	—	4-20	4-21	6-2
10	VIDEO-1	4-6, 8, 9	4-22, 23	4-24, 27	6-2
11	VIDEO-2	4-7, 8, 9	4-28, 29	4-30, 33	6-9
12	AV PRE/REC	4-8, 9, 10, 12	4-34, 35	4-34	6-16
20	FM AUDIO	4-10, 12	4-45~47	4-48	6-18
21	NORMAL AUDIO (BR-S800)	4-11	4-36~39	4-40	6-21
22	NORMAL AUDIO (BR-S500)	4-13	4-43	4-44	6-26
23	AV I/O	4-10	4-50, 51	4-52	6-28
30	SERVO/M-CTL	4-5, 12	4-58, 59	4-57	6-31
31	SYSCON	4-14, 15	4-60	4-61	6-37
32	OPE-CPU	4-10, 12, 15	4-62	4-64	6-38
33	OPE-VR	4-15	4-63	4-64	6-39
34	OPE-SW	4-15	4-62	4-64	6-40
35	OPE-DIAL	4-15	4-62	4-64	6-41
40	REAR	4-8	4-65	4-66	6-41
50	END SENSOR	—	4-21	4-21	6-42
51	REC SAFE SW	—	—	4-21	6-42
52	S-SWITCH	—	—	4-21	6-42
53	MODE MOTOR	—	—	4-21	6-42
54	C. HOUSING	—	—	4-21	6-42
55	MECHA TERMINAL	—	—	4-21	6-42
56	A/C HEAD	—	—	4-21	6-42
60	PRIMARY	—	4-67	4-68	6-43
61	SW REGULATOR	—	4-67	4-68	6-43
62	REGULATOR	—	4-67	4-68	6-44
64	LINE FILTER	—	4-67	4-68	—
94	DRUM	—	—	4-34	—
95	CONNECTOR	—	—	—	—

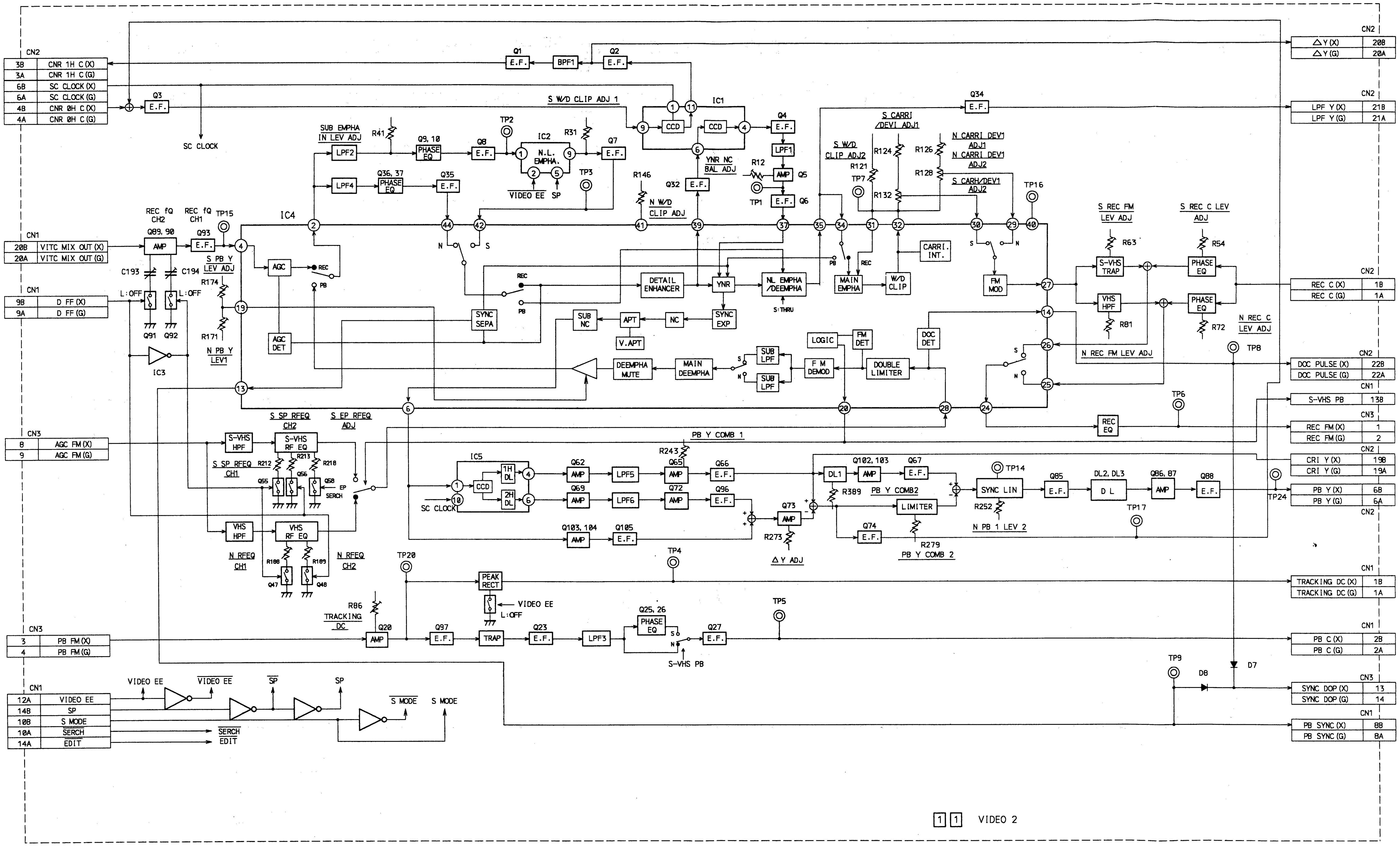
4.3 SERVO/MECHA-CONTROLL BLOCK DIAGRAM


CN1 3 EXT REF
Q1~Q5
SYNC SEP
IC3
V SYNC SEP
CN7 7 REF SYNC
IC14
67 REF SYNC
CN7 3 PB SYNC
IC3
V SYNC SEP
56 DPG/PB SYNC
95, 96 V SEL DPG SEL
CN6 3 DRUM PG
CN2 2 CTL HEAD + 3 CTL HEAD -
IC8 AMP
IC9 SHMIT
66 PB CTL
55 REC CTL
99, 100 SERVO PB SERVO REC
CN22 1 TENSION IN + 3 TENSION IN - 2 TENSION OUT + 4 TENSION OUT -
IC22~IC24 TENSION AMP
71, 72 T SENS 0 T SENS 1
IC12 AMP
68 CAP FG A
CN3 3 MR CFG A
IC10 AMP
IC11 SHMIT
IC5, IC13 FWD/REV DET
80 CAP F/R DET
CN3 1 MR CFG B
IC10 AMP
IC11 SHMIT
IC5 X2
64 CAP X2 FG
38 CAP FG B
CN30 2 SUP MR A
IC26 AMP
IC25 SHMIT
63 SUP FG
CN30 4 SUP MR B
IC26 AMP
IC25 SHMIT
82 SUP FG B1
69 SUP FG B2
CN32 5 TU MR A
IC28 AMP
IC25 SHMIT
62 TU FG
CN32 7 TU MR B
IC28 AMP
IC25 SHMIT
81 TU FG B1
70 TU FG B2
65 DRUM FG
CN6 5 DRUM FG
IC9 SHMIT
AD0 ~ AD7 26~32
ASTB 16
A8 ~ A15 18~25
RD 12
WR 11
X1 42
12MHZ XTAL
LOAD PWM 40
LOAD/CASS M 13~15
CAP PWM 35
DRUM PWM 34
SUP PWM 47
TU PWM 46
2, 3
1, 89, 91, 92 SERIAL BUS
DRUM FF 62
CNT CTL 93
CNT REV 94
CAP FWD CTL 97
SERVO REF 98
MODESW 0~2 86~88
58, 59
5, 6
2
EE PROM
IC15
DATA BUS
IC17 ADDRESS LATCH
11
ADDRESS BUS
A0, A1
IC18 64K BYTE ROM
A0~A15
D0~D7
CS
RD
IC2
IC16 ADDRESS DECORDER
A10~A15
D0~D7
IC21
EXT SEL
SERVO SYSTEM CTL
I/O EXP
MECHA SENSOR
CS
20~22
T.SOL P.SOL C.SOL
RD
WR
3
IC31 D/A CONV
2~4
5, 6 9~12
R90, R91 C34, C35 LPF
IC12 AMP
Q9, Q10 E F
CN3 CAP ERROR 6
R98, R99 C38, C39 LPF
CN6 DRUM ERROR 4
R320, R321 C168, C169 LPF
IC34 V.F
IC37 MDA
CN30 SUP COIL 1 5 SUP COIL 2 6 SUP COIL 3 7
IC35, Q40, Q41 AMP
CN29 SUP H VH+ 1 SUP H VH- 2 SUP H H1+ 3 SUP H H1- 4 SUP H H2+ 5 SUP H H2- 6 SUP H H3+ 7 SUP H H3- 8
R322, R323 C170, C171 LPF
IC34 V.F
MDA
CN32 TU COIL 1 1 TU COIL 2 2 TU COIL 3 3
IC32 SAWTOOTH GEN
IC35, Q43, Q44 AMP
CN31 TU H VH+ 3 TU H VH- 4 TU H H1+ 5 TU H H1- 6 TU H H2+ 7 TU H H2- 8 TU H H3+ 9 TU H H3- 10
R284, R285 C148, C149 LPF
IC32 AMP
Q24, Q25 E.F
IC33 DRIVER
CN26 MODE M + 3 MODE M - 4
CN25 HOUSING M + 7 HOUSING M - 8
Q26~Q39 SOL DRIVER
CN28 TENSION SOL 1 1 TENSION SOL 2 2
CN26 CLN SOL + 5 PINCH SOL 1 7 PINCH SOL 2 8
CN7 SIO CLK 15 SIO DATA 17 MEC CS 18
CN7 DRUM FF + 1 DRUM FF - 12
CN7 CTL PULSE 13
TAPE REV 10
CN3 CAP FWD CTL 7
CN7 SERVO REF 11
CN27 MODE SW 0 1 MODE SW 1 2 MODE SW 2 3
30 SERVO/M-CTL

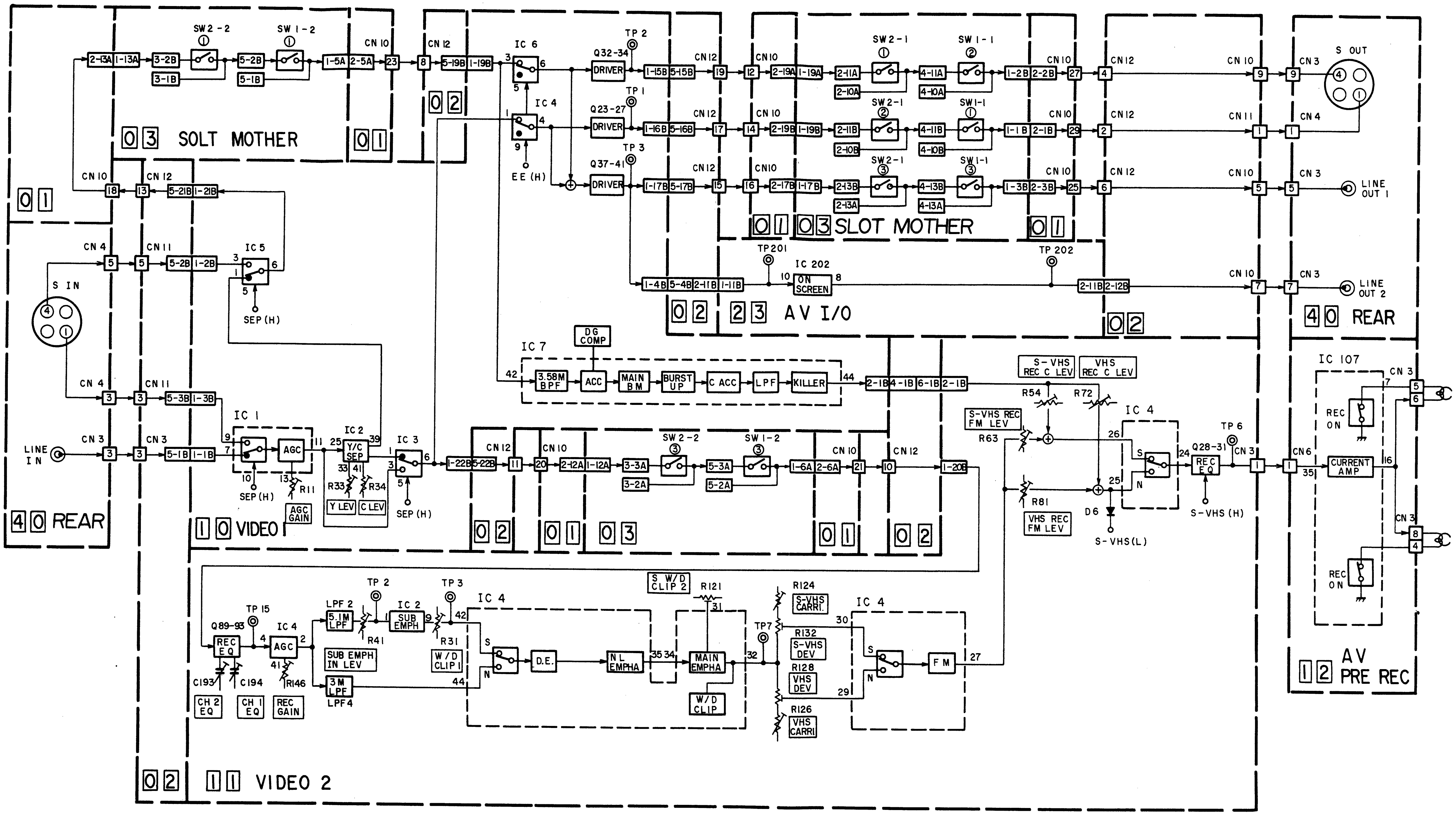
4.4 VIDEO-1 BLOCK DIAGRAM


6
5
4
3
2
1
CN1
6B REF SYNC (X)
6A REF SYNC (G)
1B LINE IN (X)
1A LINE IN (G)
3B Y IN (X)
3A Y IN (G)
21B INPUT C OUT (X)
21A INPUT C OUT (G)
2B C IN (X)
2A C IN (G)
19B INPUT C IN (X)
19A INPUT C IN (G)
CN2
21B LPF Y (X)
21A LPF Y (G)
22B DOC PULSE (X)
22A DOC PULSE (G)
2B PB C (X)
2A PB C (G)
1B REC C (X)
1A REC C (G)
9B D FF (X)
9A D FF (G)
5B ROT CTL (X)
5A ROT CTL (G)
6B SC CLOCK (X)
6A SC CLOCK (G)
19B CRI Y (X)
19A CRI Y (G)
15B BURST GATE P (X)
15A BURST GATE P (G)
8B PB SYNC (X)
8A PB SYNC (G)
7B B/W
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10
E.F.
IC1 H SYNC SEPA AGC
SEP
R11 AGC GAIN
Q29
IC5 SEP
IC2
COMB Y LEVEL ADJ R33
COMB C LEVEL ADJ R34
ADC 1H DL 1H DL BPF BPF BPF DL DAC DAC
LOGICAL COMB
LOGIC
LPF1 AMP
4fsc
Q11 LPF2 Q12, 13 AMP Q14
Q17 LPF3 Q18, 19 AMP Q20
IC3 SEP
Q15 Q16
Q88 NOISE CANCEL Q21
PB Y (X) 17B
PB Y (G) 17A
V PULSE (X) 7B
V PULSE (G) 7A
IC4 BIAS
Q28 SEARCH L:OFF
Q22
VIDEO EE
EE Y (X) 22B
EE Y (G) 22A
Q78 Q79 AMP OUT BUFFER
TP1 TP2
Q31 Q30
IC6 VIDEO EE
Q32, 33 AMP Q34
Y OUT (X) 16B
Y OUT (G) 16A
C OUT (X) 15B
C OUT (G) 15A
DG COMPE S MODE VIDEO EE
Q51
TP8 TP11 OFF ON SW1
IC8 NOR DOC
R259 1H LEV.
R166 1H PHASE
Q52 L18, C132 TRAP
IC9 CCD CCD
Q70 BPF3 Q74
Q71 Q72, 73 AMP
R253 DOC PHS R250 DOC LEV
Q35 Q36 Q80, 81 AMP OUT BUFFER TP3
COMP OUT (X) 17B
COMP OUT (G) 17A
COMP 2 OUT (X) 4B
COMP 2 OUT (G) 4A
IC7 BPF REC PB ACC MAIN BM BPF1 BURST DE EMP
LOGICAL COMB ON OFF PB KILLER
Q68 BPF2 Q50 Q69 TP6 R258 2H LEV.
TP12
Q42 REC KILLER LPF CHROMA ACC BURST EMPHA
VCXO X4 XTAL
R147 320fH ADJ
C89 VCXO ADJ
Q44 TRAP Q43 4fsc
R159 CNR PHASE CNR Q48
R164 2H PHASE
R156 CNR LEV.
TP5
Δ Y (X) 20B
Δ Y (G) 20A
Q67 E Q AMP
CNR 0H C (X) 4B
CNR 0H C (G) 4A
CNR 1H C (X) 3B
CNR 1H C (G) 3A
C PHASE R208
IC12
DEM 90° SHIFTER 10dB AMP FSC IN TINT 90° SHIFTER TINT CTL AMP TINT CTL
C IN DEM LPF CLAMP CNC DL DL CAI DET C TINT 90° SHIFTER
OFFSET CANCEL CAI DL 6dB AMP TEST SW MOD COLOR CTL AMP
CLAMP SLICE SYNC SEP LPF CAI DET Y CAI LEV.CTL. COLOR CTL
MMV PULSE GEN
C LEV. R221
BPF Q63 EQ AMP Q83 E.F.
R217 BURST LEV
TP13 Q91
R201 Y/C DELAY ADJ
R219 R220 CARRI BAL.1 CARRI BAL.2
EDIT Q64 Q65 VIDEO EE
IC13 SERI→PARA SHIFT RESISTOR
EDIT SP S MODE SERCH SEP
VIDEO EE
VIDEO DATA OUT 11B
S DATA CLOCK 11A
VIDEO REC 13A
VIDEO EE 12A
STROBE 12B
SP 14B
10 VIDEO 1
A
B
C
E
F
G
H

4.5 VIDEO-2 BLOCK DIAGRAM


CN2
3B CNR 1H C(X)
3A CNR 1H C(G)
6B SC CLOCK(X)
6A SC CLOCK(G)
4B CNR 0H C(X)
4A CNR 0H C(G)
Q3 E.F.
SC CLOCK
Q1 E.F.
BPF1
Q2 E.F.
S W/D CLIP ADJ 1
IC1
CCD
Q4 E.F.
LPF1
AMP Q5
E.F. Q6
R12
TP1
Q32 E.F.
YNR NC BAL ADJ
Q34 E.F.
S CARRI /DEVI ADJ1
S W/D CLIP ADJ2
R121 R124 R126 R128 R132
TP7
N CARRI DEVI ADJ1
N CARRI DEVI ADJ2
S CARH/DEV1 ADJ2
TP16
SUB EMPHA IN LEV ADJ
R41
LPF2
Q9, 10 PHASE EQ
Q8 E.F.
TP2
IC2 N.L. EMPHA.
R31
Q7 E.F.
LPF4
Q36, 37 PHASE EQ
Q35 E.F.
VIDEO EE SP
TP3
R146
N W/D CLIP ADJ
IC4
REC fQ CH2
REC fQ CH1
TP15
Q89, 90 AMP
Q93 E.F.
CN1
20B VITC MIX OUT(X)
20A VITC MIX OUT(G)
C193 C194
S PB Y LEV ADJ
R174
AGC
REC PB
AGC DET
9B D FF(X)
9A D FF(G)
L:OFF
Q91 Q92
R171
N PB Y LEV1
IC3
SYNC SEPA
DETAIL ENHANCER
YNR
NL EMPHA /DEEMPHA
S:THRU
MAIN EMPHA
W/D CLIP
CARRI. INT.
FM MOD
SUB NC
APT
V.APT
NC
SYNC EXP
LOGIC
FM DET
DOC DET
DEEMPHA MUTE
MAIN DEEMPHA
SUB LPF
F M DEMOD
DOUBLE LIMITER
S REC FM LEV ADJ
R63
S-VHS TRAP
VHS HPF
R81
N REC FM LEV ADJ
S REC C LEV ADJ
R54
PHASE EQ
R72
N REC C LEV ADJ
TP8
CN2
△Y(X) 20B
△Y(G) 20A
LPF Y(X) 21B
LPF Y(G) 21A
REC C(X) 1B
REC C(G) 1A
DOC PULSE(X) 22B
DOC PULSE(G) 22A
CN1
S-VHS PB 13B
TP6
REC EQ
CN3
REC FM(X) 1
REC FM(G) 2
CRI Y(X) 19B
CRI Y(G) 19A
PB Y(X) 6B
PB Y(G) 6A
CN3
8 AGC FM(X)
9 AGC FM(G)
S SP RFEQ CH2
S EP RFEQ ADJ
S-VHS HPF
S-VHS RF EQ
S SP RFEQ CH1
R212 R213 R218
Q55 Q56 Q58
EP SERCH
VHS HPF
VHS RF EQ
N RFEQ CH1
N RFEQ CH2
R188 R189
Q47 Q48
PB Y COMB 1
IC5
SC CLOCK
1H DL
2H DL
Q62 AMP
Q69 AMP
LPF5
LPF6
R243
Q65 AMP
Q72 AMP
Q66 E.F.
Q96 E.F.
Q103, 104 AMP
Q105 E.F.
Q73 AMP
R273
△Y ADJ
DL1
Q102, 103 AMP
Q67 E.F.
R309
PB Y COMB2
LIMITER
Q74 E.F.
R279
PB Y COMB 2
TP14
SYNC LIN
R252
N PB 1 LEV 2
Q85 E.F.
DL2, DL3 D L
Q86, 87 AMP
Q88 E.F.
TP17
TP24
TP20
TP4
PEAK RECT
VIDEO EE
L:OFF
R86
TRACKING DC
Q20 AMP
Q97 E.F.
TRAP
Q23 E.F.
LPF3
Q25, 26 PHASE EQ
Q27 E.F.
S-VHS PB
TP5
CN1
TRACKING DC(X) 1B
TRACKING DC(G) 1A
CN3
3 PB FM(X)
4 PB FM(G)
PB C(X) 2B
PB C(G) 2A
TP9
D8
D7
SYNC DOP(X) 13
SYNC DOP(G) 14
PB SYNC(X) 8B
PB SYNC(G) 8A
CN1
12A VIDEO EE
14B SP
10B S MODE
10A SERCH
14A EDIT
VIDEO EE
VIDEO EE
SP
SP
S MODE
S MODE
SERCH
EDIT
1 1 VIDEO 2

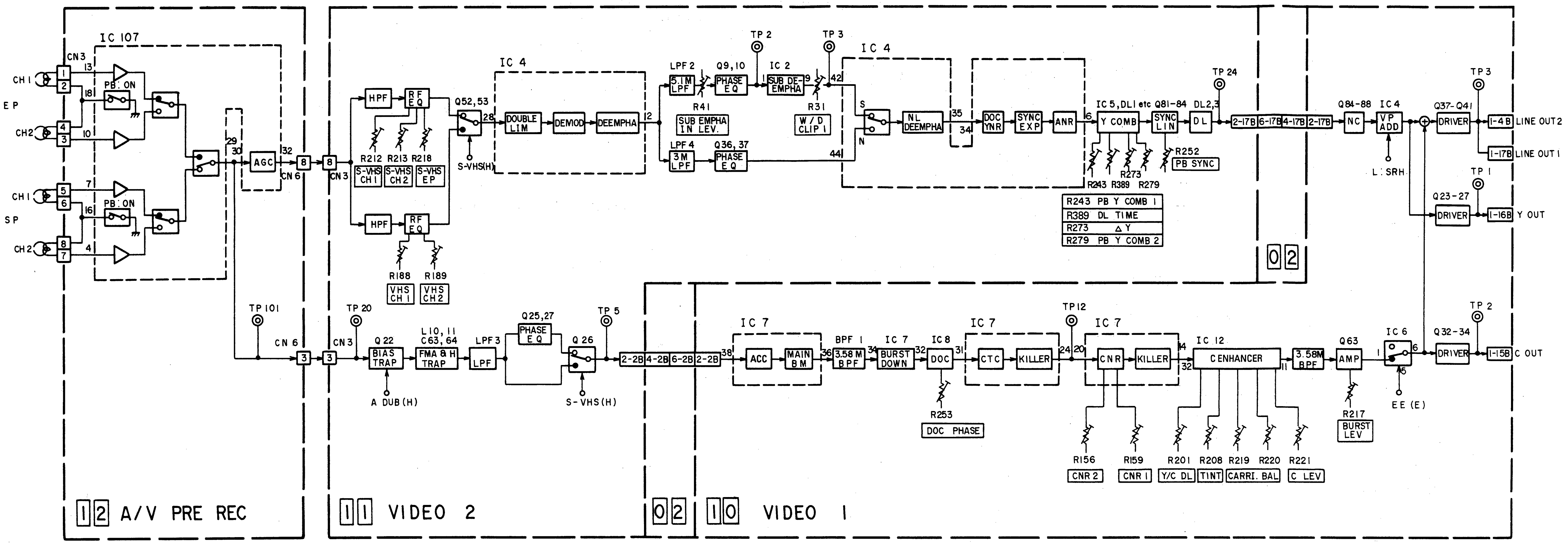
4.6 VIDEO RECORDING SIGNAL BLOCK DIAGRAM


03 SOLT MOTHER
01
02
SW2-2 ①
SW1-2 ①
2-13A 1-13A
3-2B
3-1B
5-2B
5-1B
1-5A 2-5A
CN10
23
CN12
8
5-19B 1-19B
IC 6
IC 4
EE (H)
TP 2
Q32-34
DRIVER
TP 1
Q23-27
TP 3
Q37-41
1-15B 5-15B
1-16B 5-16B
1-17B 5-17B
CN12
CN10
SW2-1 ①
SW1-1 ②
SW2-1 ②
SW1-1 ①
SW2-1 ③
SW1-1 ③
2-19A 1-19A
2-11A
2-10A
4-11A
4-10A
1-2B 2-2B
2-11B
2-10B
4-11B
4-10B
1-1B 2-1B
2-17B 1-17B
2-13B
2-13A
4-13B
4-13A
1-3B 2-3B
01 03 SLOT MOTHER
01
TP201
IC 202
ON SCREEN
TP 202
1-4B 5-4B 2-11B 1-11B
2-11B 2-12B
02 23 AV I/O
02
S OUT
CN3
CN4
LINE OUT 1
LINE OUT 2
40 REAR
01
CN10
CN12
18
13
5-21B 1-21B
CN4
CN11
5-2B 1-2B
IC 5
SEP (H)
S IN
5-3B 1-3B
CN3
LINE IN
5-1B 1-1B
IC 1
AGC
IC 2
Y/C SEP
R33
R34
Y LEV
C LEV
R11
AGC GAIN
IC 3
SEP (H)
40 REAR
10 VIDEO
IC 7
DG COMP
3.58M BPF
ACC
MAIN BM
BURST UP
C ACC
LPF
KILLER
2-1B 4-1B 6-1B 2-1B
1-22B 5-22B
CN12
CN10
2-12A 1-12A
SW2-2 ③
SW1-2 ③
3-3A
3-2A
5-3A
5-2A
1-6A 2-6A
CN10
CN12
1-20B
02
01 03
01
02
S-VHS REC C LEV
VHS REC C LEV
R54
R72
S-VHS REC FM LEV
R63
R81
VHS REC FM LEV
IC 4
D6
S-VHS (L)
TP 6
Q28-31
REC EQ
S-VHS (H)
CN3
CN6
IC 107
REC ON
CURRENT AMP
SP CH 1
SP CH 2
12 AV PRE REC
TP 15
Q89-93
REC EQ
C193
C194
CH 2 EQ
CH 1 EQ
IC 4
AGC
R146
REC GAIN
LPF 2
5.1M LPF
R41
SUB EMPH IN LEV
3M LPF
LPF4
TP 2
IC 2
SUB EMPH
TP 3
R31
W/D CLIP 1
IC 4
D.E.
NL EMPHA
S W/D CLIP 2
R121
MAIN EMPHA
W/D CLIP
TP7
R124
S-VHS CARRI.
R132
S-VHS DEV
R128
VHS DEV
R126
VHS CARRI
IC 4
FM
02 11 VIDEO 2

CIRCUIT			S-VHS	VHS
		MENU No.101	SP	SP
Y	NL EMPHASIS		OFF	*ON
	YNR	EDIT or DUB	OFF	YNR OFF
		OFF (PB)/ENH/CNR OFF	OFF	YNR OFF
	DETAIL ENHANCER	EDIT or DUB	OFF	OFF
		OFF (PB)/ENH/CNR OFF	OFF	ON

Effectiveness of each circuit is set by the mode i.e. SP/EP. Mark* shows less effective compare with the ONs without*.

4.7 VIDEO PLAYBACK SIGNAL BLOCK DIAGRAM

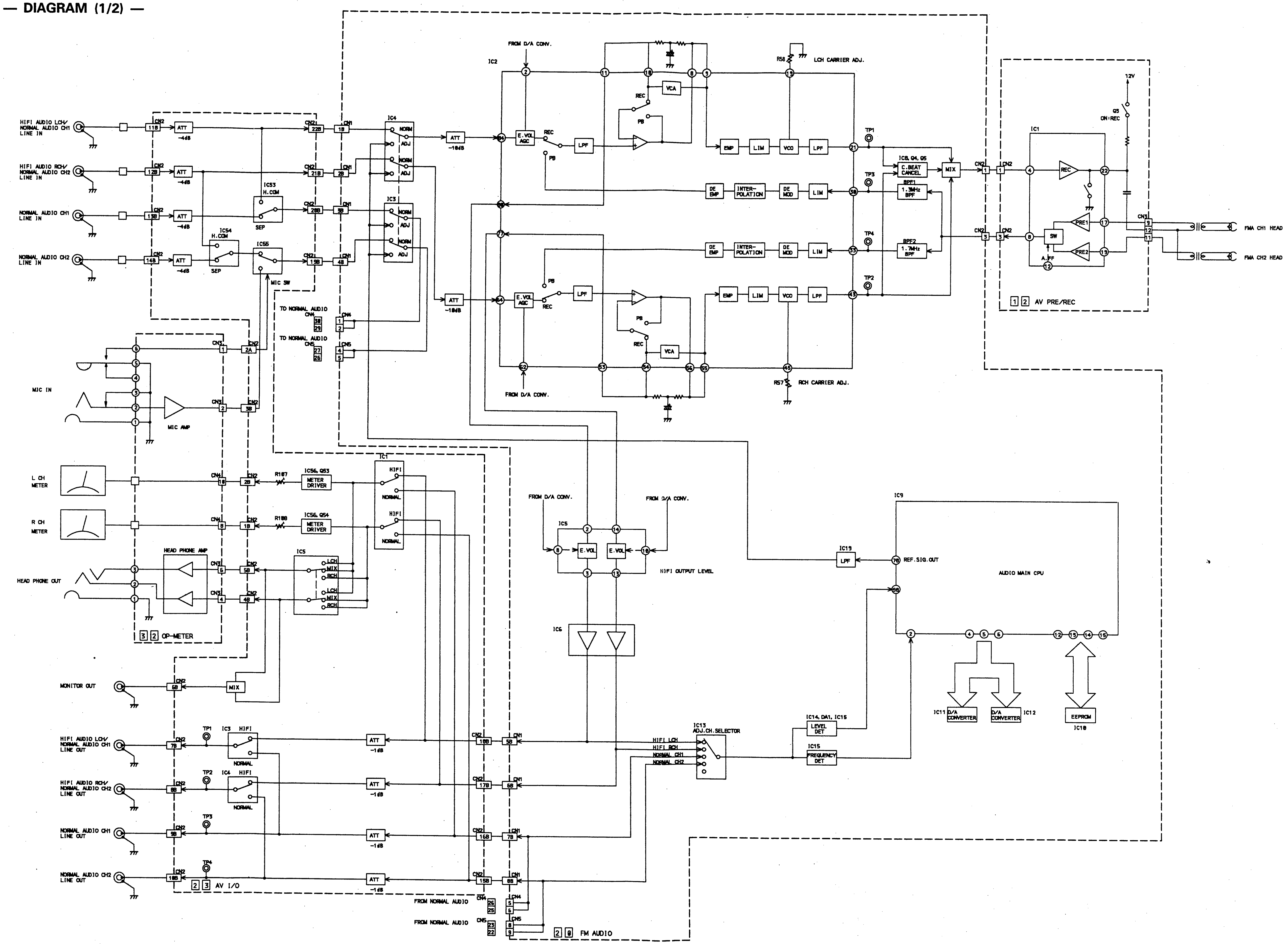

IC 107
CN3
CH 1
EP
CH2
CH 1
SP
CH2
PB: ON
PB: ON
AGC
CN 6
CN 3
TP 101
CN 6
HPF
RF EQ
HPF
RF EQ
Q52,53
S-VHS(H)
R212 R213 R218
S-VHS CH 1
S-VHS CH 2
S-VHS EP
R188 R189
VHS CH 1
VHS CH 2
IC 4
DOUBLE LIM
DEMOD
DEEMPHA
LPF 2
5.1M LPF
Q9,10
PHASE EQ
IC 2
SUB DE-EMPHA
R41
SUB EMPHA IN LEV.
R31
W/D CLIP 1
LPF 4
3M LPF
Q36, 37
PHASE EQ
TP 2
TP 3
IC 4
S
N
NL DEEMPHA
DOC YNR
SYNC EXP
ANR
IC 5, DL1 etc
Y COMB
Q81-84
SYNC LIN
DL2,3
DL
TP 24
R252
PB SYNC
R243 R389 R273 R279
R243 PB Y COMB 1
R389 DL TIME
R273 △Y
R279 PB Y COMB 2
2-17B
6-17B
4-17B
2-17B
Q84-88
NC
IC 4
VP ADD
L: SRH
Q37-Q41
DRIVER
1-4B
LINE OUT2
1-17B
LINE OUT 1
TP 3
TP 1
Q23-27
DRIVER
1-16B
Y OUT
TP 20
CN 3
Q 22
BIAS TRAP
A DUB (H)
L10, 11
C63, 64
FMA & H TRAP
LPF3
LPF
Q25,27
PHASE EQ
Q 26
TP 5
S-VHS (H)
2-2B
4-2B
6-2B
2-2B
IC 7
ACC
MAIN BM
BPF 1
3.58 M BPF
IC 7
BURST DOWN
IC 8
DOC
R253
DOC PHASE
IC 7
CTC
KILLER
TP12
IC 7
CNR
KILLER
IC 12
C ENHANCER
R156
CNR 2
R159
CNR 1
R201 R208 R219 R220 R221
Y/C DL
TINT
CARRI. BAL
C LEV
3.58M BPF
Q63
AMP
R217
BURST LEV
IC 6
EE (E)
Q32-34
DRIVER
TP 2
1-15B
C OUT
12 A/V PRE REC
11 VIDEO 2
02
02
10 VIDEO 1

CIRCUIT			MENU No.101	S-VHS SP	S-VHS EP	VHS SP	VHS EP
Y	NL DEEMPHASIS			OFF	OFF	∗ON	ON
	YNR		EDIT or DUB	OFF	OFF	OFF	LNC
			OFF(PB)/ENH/CNR OFF	LNC	LNC	OFF	YNR
	ANR	NC/SUB NC	EDIT or DUB	OFF	OFF	OFF	OFF
			OFF(PB)/ENH/CNR OFF	∗ON	∗ON	∗ON	ON
		APERTURE CTL	EDIT or DUB/OFF(PB)/CNR OFF	OFF	OFF	OFF	OFF
			ENH	ON	ON	ON	ON
C	CNR		EDIT or DUB/CNR OFF	OFF	OFF	OFF	OFF
			OFF(PB)/ENH	ON	ON	ON	ON
	CROSSTALK CANCELLER			3H	2H	3H	2H

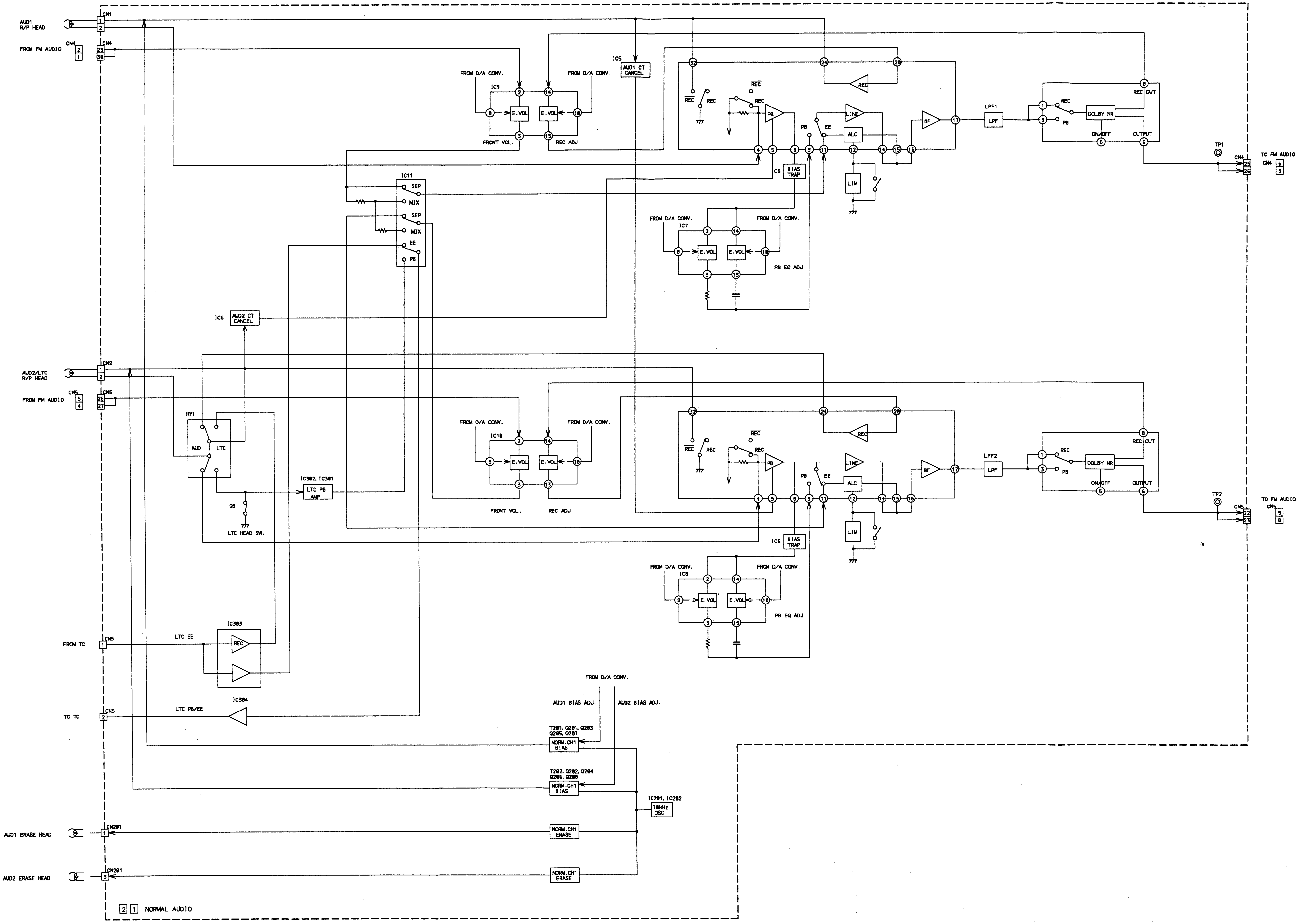
Effectiveness of each circuit is set by the mode i.e. SP/EP.
Mark∗ shows less effective compare with the ONs without∗.

4.8 AUDIO BLOCK DIAGRAM (BR-S800)

— DIAGRAM (1/2) —

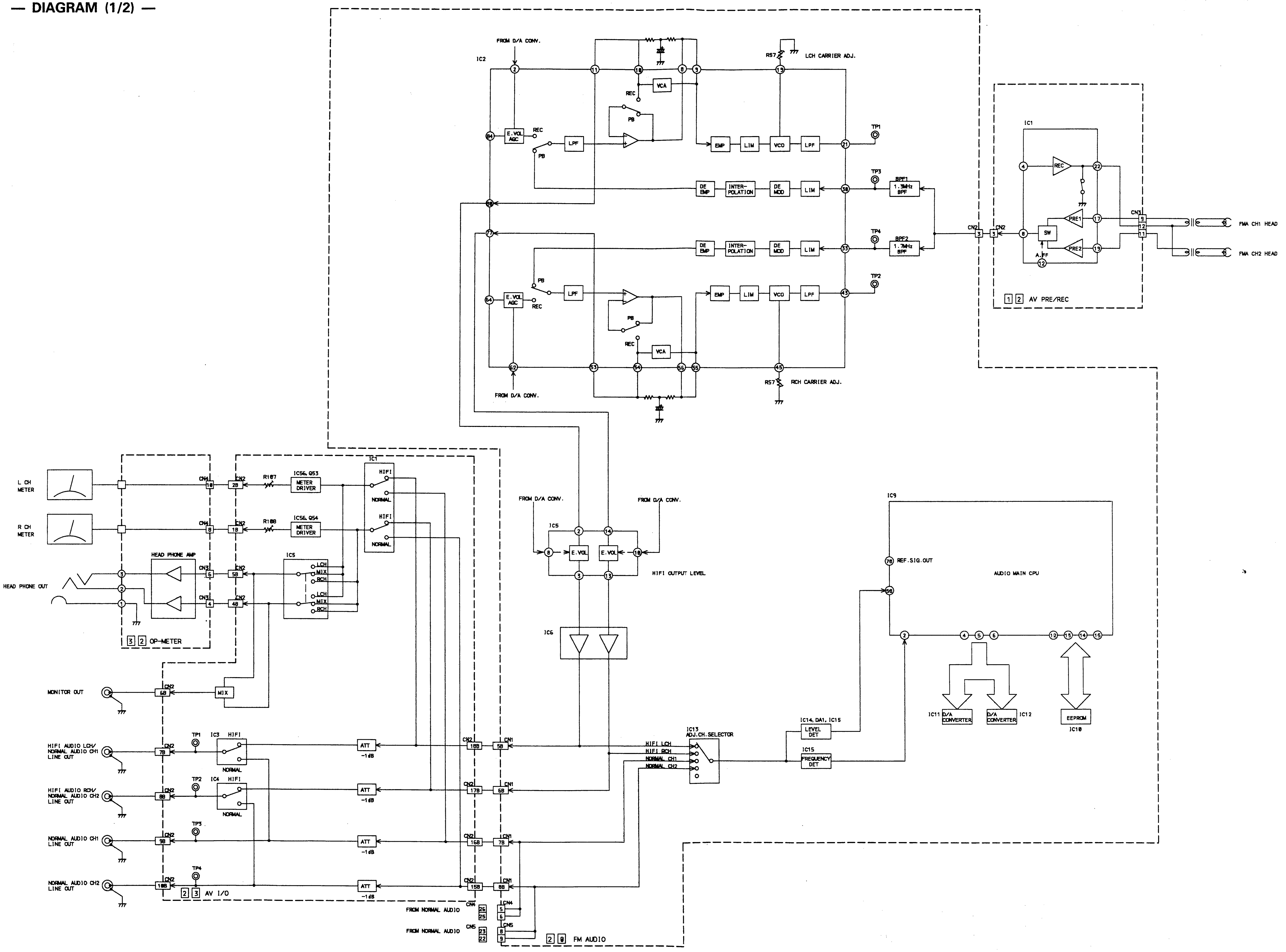

HIFI AUDIO LCH/ NORMAL AUDIO CH1 LINE IN
HIFI AUDIO RCH/ NORMAL AUDIO CH2 LINE IN
NORMAL AUDIO CH1 LINE IN
NORMAL AUDIO CH2 LINE IN
CN2
ATT
-4dB
IC53 H.COM
SEP
IC54 H.COM
IC55
MIC SW
CN1
IC4
NORM
ADJ
IC3
ATT
-10dB
TO NORMAL AUDIO CN4
TO NORMAL AUDIO CN5
CN3
MIC IN
MIC AMP
L CH METER
R CH METER
R107
R108
IC56, Q53
IC56, Q54
METER DRIVER
IC1
HIFI
NORMAL
HEAD PHONE AMP
HEAD PHONE OUT
IC5
LCH
MIX
RCH
3 2 OP-METER
MONITOR OUT
MIX
HIFI AUDIO LCH/ NORMAL AUDIO CH1 LINE OUT
HIFI AUDIO RCH/ NORMAL AUDIO CH2 LINE OUT
NORMAL AUDIO CH1 LINE OUT
NORMAL AUDIO CH2 LINE OUT
TP1
TP2
TP3
TP4
IC3 HIFI
IC4 HIFI
NORMAL
ATT
-1dB
2 3 AV I/O
FROM NORMAL AUDIO CN4
FROM NORMAL AUDIO CN5
2 0 FM AUDIO
FROM D/A CONV.
IC2
E.VOL AGC
REC
PB
LPF
VCA
R58
LCH CARRIER ADJ.
EMP
LIM
VCO
DE EMP
INTER-POLATION
DE MOD
R57
RCH CARRIER ADJ.
IC8, Q4, Q5
C.BEAT CANCEL
MIX
BPF1 1.3MHz BPF
BPF2 1.7MHz BPF
12V
Q3 ON:REC
IC1
REC
PRE1
PRE2
SW
A.FF
CN3
FMA CH1 HEAD
FMA CH2 HEAD
1 2 AV PRE/REC
IC5
E.VOL
HIFI OUTPUT LEVEL
IC6
IC19
LPF
IC9
REF.SIG.OUT
AUDIO MAIN CPU
IC13 ADJ.CH.SELECTOR
HIFI LCH
HIFI RCH
NORMAL CH1
NORMAL CH2
IC14, DA1, IC15
LEVEL DET
IC15
FREQUENCY DET
IC11 D/A CONVERTER
D/A CONVERTER IC12
EEPROM
IC10
6
5
4
3
2
1
A
B
C
E
F
G
H

— DIAGRAM (2/2) —

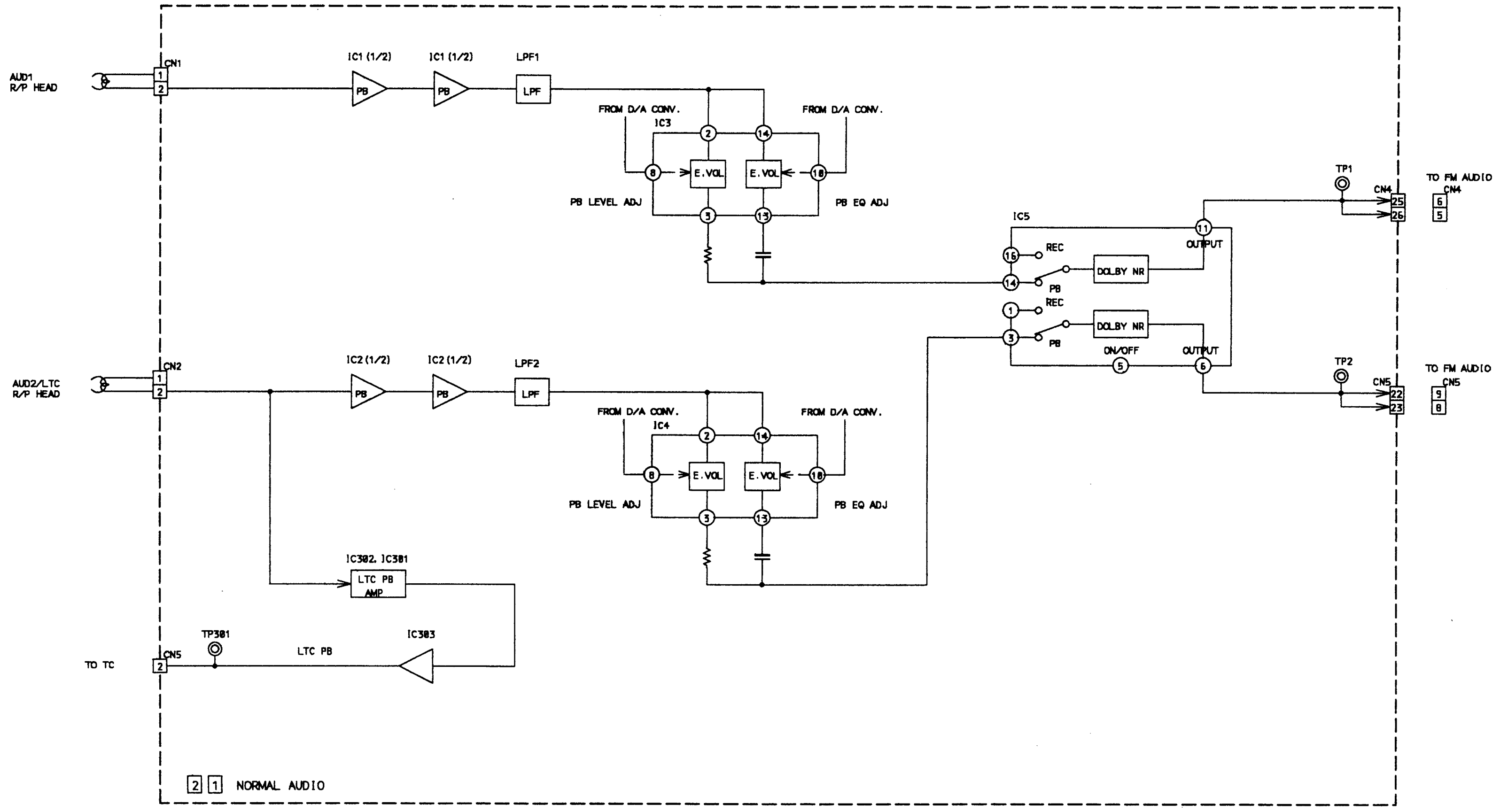

AUD1 R/P HEAD
CN1
FROM FM AUDIO
CN4
IC5
AUD1 CT CANCEL
IC9
FROM D/A CONV.
E.VOL
FRONT VOL.
REC ADJ
REC
PB
LINE
ALC
BF
LIM
BIAS TRAP
LPF1
LPF
DOLBY NR
REC OUT
ON/OFF
OUTPUT
TP1
TO FM AUDIO
IC11
SEP
MIX
EE
IC7
PB EQ ADJ
IC6
AUD2 CT CANCEL
AUD2/LTC R/P HEAD
CN2
CN5
RY1
AUD
LTC
IC302, IC301
LTC PB AMP
Q5
LTC HEAD SW.
IC10
LPF2
TP2
IC8
FROM TC
LTC EE
IC303
TO TC
LTC PB/EE
IC304
AUD1 BIAS ADJ.
AUD2 BIAS ADJ.
T201, Q201, Q203, Q205, Q207
NORM.CH1 BIAS
T202, Q202, Q204, Q206, Q208
IC201, IC202
70kHz OSC
AUD1 ERASE HEAD
CN201
NORM.CH1 ERASE
AUD2 ERASE HEAD
2 1 NORMAL AUDIO
A
B
C
E
F
G
H
1
2
3
4
5
6

4.9 AUDIO BLOCK DIAGRAM (BR-S500)

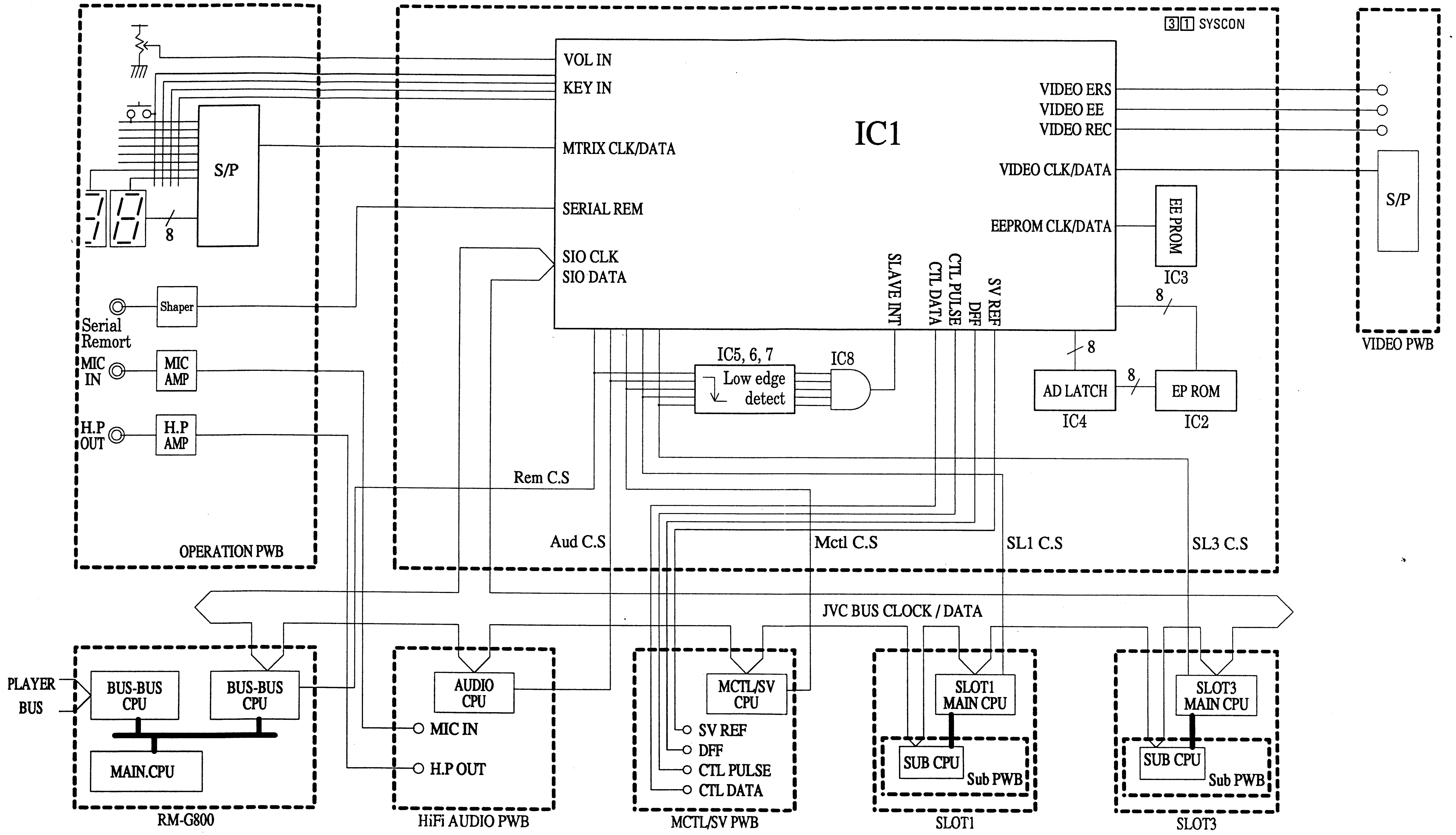
— DIAGRAM (1/2) —


IC2
FROM D/A CONV.
2
11
10
8
9
19
R57
LCH CARRIER ADJ.
VCA
REC
PB
84
E.VOL AGC
REC
PB
LPF
EMP
LIM
VCO
LPF
21
TP1
TP3
BPF1
1.3MHz BPF
DE EMP
INTER-POLATION
DE MOD
LIM
38
80
77
TP4
BPF2
1.7MHz BPF
DE EMP
INTER-POLATION
DE MOD
LIM
33
TP2
PB
64
E.VOL AGC
REC
LPF
PB
EMP
LIM
VCO
LPF
43
REC
VCA
62
53
54
56
55
45
R57
RCH CARRIER ADJ.
FROM D/A CONV.
CN2
3
CN2
3
IC1
4
REC
22
PRE1
17
8
SW
A.FF
12
PRE2
19
CN3
9
12
11
FMA CH1 HEAD
FMA CH2 HEAD
1 2 AV PRE/REC
L CH METER
R CH METER
CN4
10
8
CN2
2B
1B
R107
R108
IC56, Q53
METER DRIVER
IC56, Q54
METER DRIVER
IC1
HIFI
NORMAL
HIFI
NORMAL
HEAD PHONE AMP
HEAD PHONE OUT
3
2
1
CN3
6
4
CN2
5B
4B
IC5
LCH
MIX
RCH
LCH
MIX
RCH
3 2 OP-METER
MONITOR OUT
CN2
6B
MIX
HIFI AUDIO LCH/ NORMAL AUDIO CH1 LINE OUT
CN2
7B
TP1
IC3
HIFI
NORMAL
HIFI AUDIO RCH/ NORMAL AUDIO CH2 LINE OUT
CN2
8B
TP2
IC4
HIFI
NORMAL
NORMAL AUDIO CH1 LINE OUT
CN2
9B
TP3
NORMAL AUDIO CH2 LINE OUT
CN2
10B
TP4
2 3 AV I/O
ATT
-1dB
ATT
-1dB
ATT
-1dB
ATT
-1dB
CN2
18B
17B
16B
15B
CN1
5B
6B
7B
8B
CN4
FROM NORMAL AUDIO
26
25
CN4
5
6
CN5
FROM NORMAL AUDIO
23
22
CN5
8
9
2 8 FM AUDIO
FROM D/A CONV.
FROM D/A CONV.
IC5
2
14
8
E.VOL
E.VOL
10
3
13
HIFI OUTPUT LEVEL
IC6
IC13
ADJ.CH.SELECTOR
HIFI LCH
HIFI RCH
NORMAL CH1
NORMAL CH2
IC14, DA1, IC15
LEVEL DET
IC15
FREQUENCY DET
IC9
76
REF.SIG.OUT
56
AUDIO MAIN CPU
2
4
5
6
12
13
14
15
IC11
D/A CONVERTER
D/A CONVERTER
IC12
EEPROM
IC10
6
5
4
3
2
1
A
B
C
E
F
G
H

— DIAGRAM (2/2) —


AUD1
R/P HEAD
CN1
1
2
IC1 (1/2)
PB
IC1 (1/2)
PB
LPF1
LPF
FROM D/A CONV.
IC3
FROM D/A CONV.
2
14
8
E.VOL
E.VOL
18
PB LEVEL ADJ
3
13
PB EQ ADJ
AUD2/LTC
R/P HEAD
CN2
1
2
IC2 (1/2)
PB
IC2 (1/2)
PB
LPF2
LPF
FROM D/A CONV.
IC4
FROM D/A CONV.
2
14
8
E.VOL
E.VOL
18
PB LEVEL ADJ
3
13
PB EQ ADJ
IC302, IC301
LTC PB
AMP
TO TC
CN5
2
TP301
LTC PB
IC303
IC5
16
REC
14
PB
DOLBY NR
11
OUTPUT
1
REC
3
PB
DOLBY NR
ON/OFF
5
OUTPUT
6
TP1
CN4
25
26
TO FM AUDIO
CN4
6
5
TP2
CN5
22
23
TO FM AUDIO
CN5
9
8
2 1 NORMAL AUDIO

4.10 SYSCON BLOCK DIAGRAM (BR-S800)



3 1 SYSCON
IC1
VOL IN
KEY IN
MTRIX CLK/DATA
SERIAL REM
SIO CLK
SIO DATA
SLAVE INT
CTL DATA
CTL PULSE
DFF
SV REF
VIDEO ERS
VIDEO EE
VIDEO REC
VIDEO CLK/DATA
EEPROM CLK/DATA
EE PROM
IC3
8
8
8
8
AD LATCH
IC4
EP ROM
IC2
IC5, 6, 7
Low edge detect
IC8
S/P
Shaper
Serial Remort
MIC IN
MIC AMP
H.P OUT
H.P AMP
OPERATION PWB
S/P
VIDEO PWB
Rem C.S
Aud C.S
Mctl C.S
SL1 C.S
SL3 C.S
JVC BUS CLOCK / DATA
PLAYER BUS
BUS-BUS CPU
BUS-BUS CPU
MAIN.CPU
RM-G800
AUDIO CPU
MIC IN
H.P OUT
HiFi AUDIO PWB
MCTL/SV CPU
SV REF
DFF
CTL PULSE
CTL DATA
MCTL/SV PWB
SLOT1 MAIN CPU
SUB CPU
Sub PWB
SLOT1
SLOT3 MAIN CPU
SUB CPU
Sub PWB
SLOT3

6

5

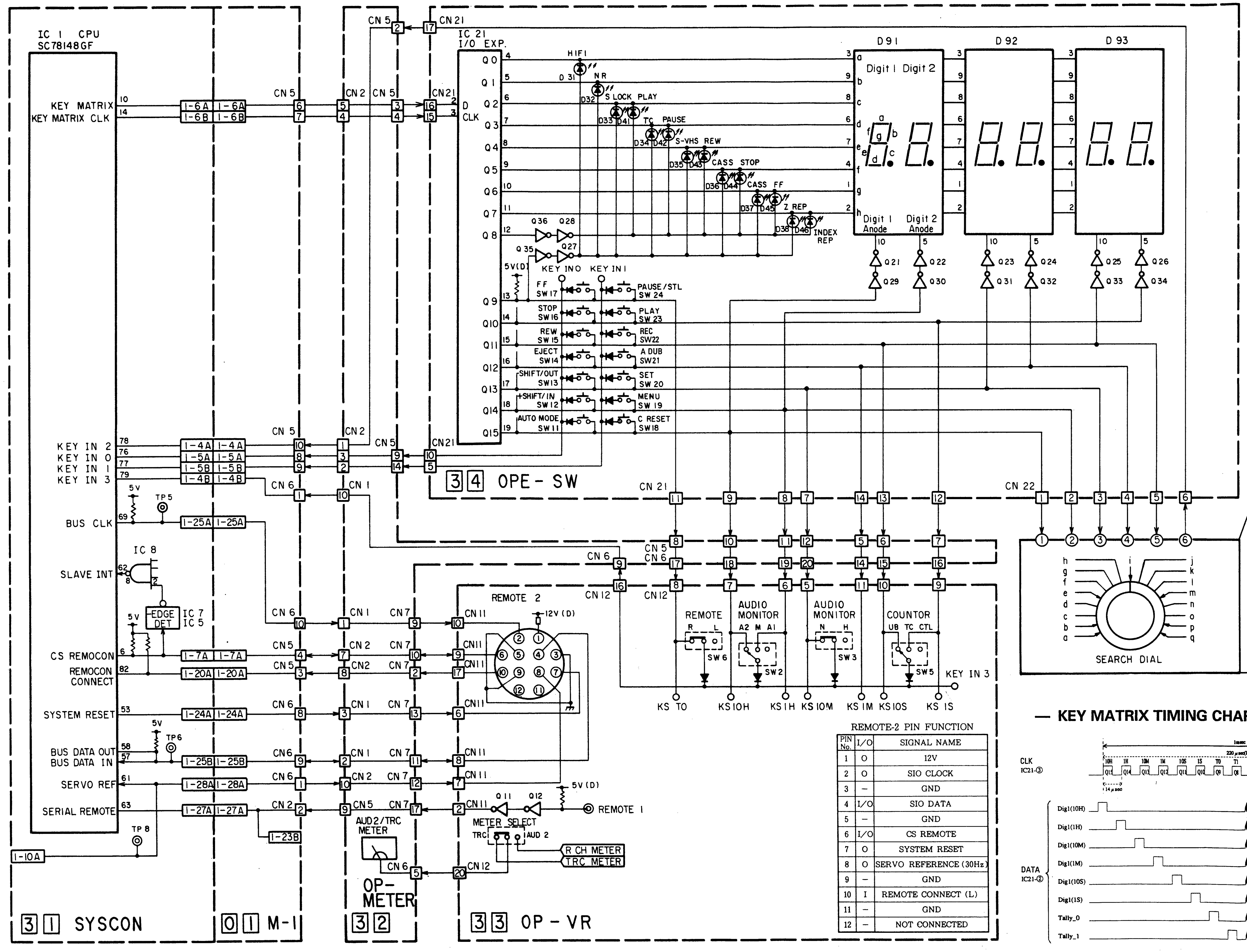
4

3

2

1

4.11 OPERATION BLOCK DIAGRAM

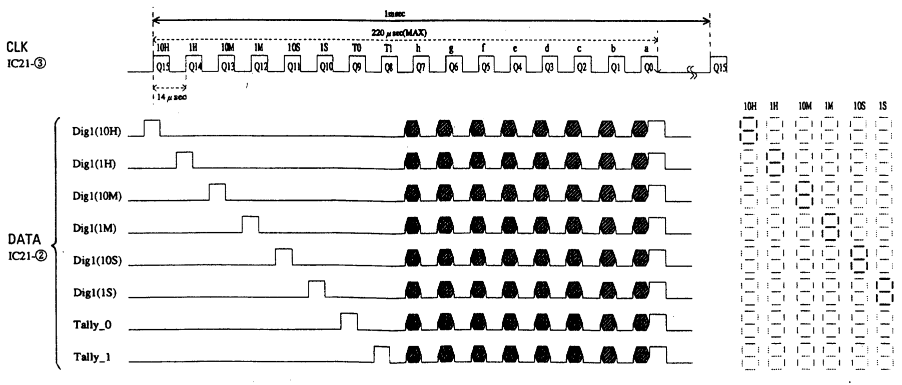

IC 1 CPU
SC78148GF
KEY MATRIX
KEY MATRIX CLK
KEY IN 2
KEY IN 0
KEY IN 1
KEY IN 3
BUS CLK
SLAVE INT
IC 8
EDGE DET
IC 7
IC 5
CS REMOCON
REMOCON CONNECT
SYSTEM RESET
BUS DATA OUT
BUS DATA IN
SERVO REF
SERIAL REMOTE
TP5
TP6
TP8
5V
1-10A
1-6A
1-6B
1-4A
1-5A
1-5B
1-4B
1-25A
1-7A
1-20A
1-24A
1-25B
1-28A
1-27A
1-23B
CN 5
CN 2
CN 6
CN 1
CN 7
CN 21
CN 11
CN 12
CN 22
IC 21
I/O EXP.
D
CLK
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
HIFI
NR
S LOCK
PLAY
TC
PAUSE
S-VHS
REW
CASS
STOP
FF
Z REP
INDEX REP
D31
D32
D33
D34
D35
D36
D37
D38
D41
D42
D43
D44
D45
D46
Q36
Q28
Q35
Q27
5V(D)
KEY IN0
KEY IN1
FF SW17
PAUSE/STL SW24
STOP SW16
PLAY SW23
REW SW15
REC SW22
EJECT SW14
A DUB SW21
SHIFT/OUT SW13
SET SW20
+SHIFT/IN SW12
MENU SW19
AUTO MODE SW11
C RESET SW18
D91
D92
D93
Digit 1
Digit 2
Digit 1 Anode
Digit 2 Anode
Q21
Q22
Q23
Q24
Q25
Q26
Q29
Q30
Q31
Q32
Q33
Q34
3 4 OPE-SW
REMOTE 2
12V (D)
REMOTE
AUDIO MONITOR
A2 M A1
AUDIO MONITOR
N H
COUNTOR
UB TC CTL
SW6
SW2
SW3
SW5
KEY IN 3
KS T0
KS 10H
KS 1H
KS 10M
KS 1M
KS 10S
KS 1S
Q11
Q12
5V (D)
REMOTE 1
METER SELECT
TRC
AUD 2
R CH METER
TRC METER
AUD2/TRC METER
OP-METER
SEARCH DIAL
3 1 SYSCON
0 1 M-1
3 2
3 3 OP-VR

REMOTE-2 PIN FUNCTION

PIN No.	I/O	SIGNAL NAME
1	O	12V
2	O	SIO CLOCK
3	–	GND
4	I/O	SIO DATA
5	–	GND
6	I/O	CS REMOTE
7	O	SYSTEM RESET
8	O	SERVO REFERENCE (30Hz)
9	–	GND
10	I	REMOTE CONNECT (L)
11	–	GND
12	–	NOT CONNECTED

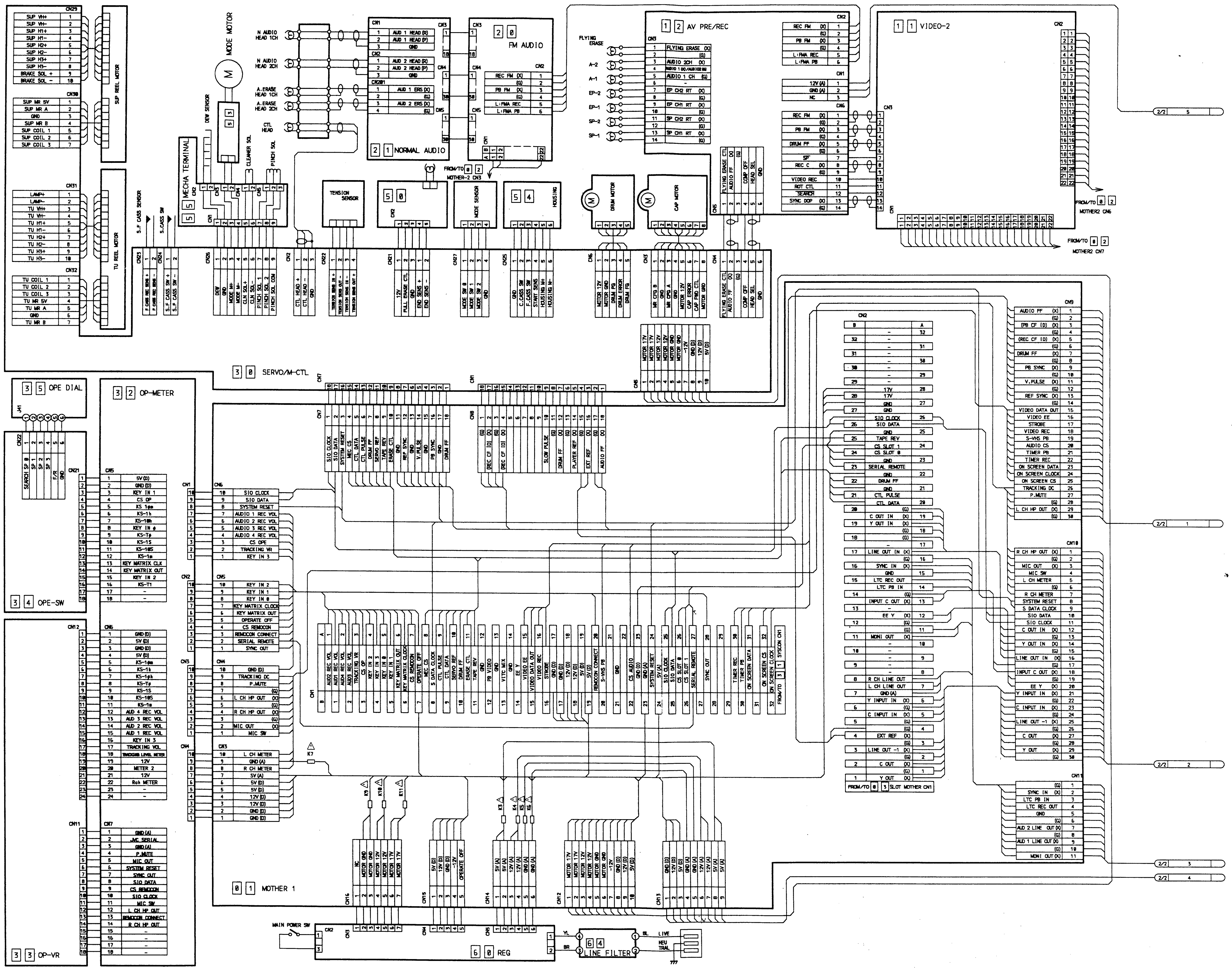
POSITION	PIN No.					TAPE SPEED			
	MENU No.337 SLOW MODE					LINEAR	LINEAR	STEP	STEP
	MENU No.340 SEARCH SPEED					×33	×17	×33	×17
	①	②	③	④	⑤				
a	ON	ON	ON	ON		−33	−17	−33	−17
b		ON	ON	ON		−11	−11	−11	−11
c			ON	ON		−5	−5	−5	−5
d	ON		ON	ON		−2	−2	−2	−2
e	ON			ON		−1	−1	−1	−1
f				ON		−1/2	−1/2	−1/6	−1/6
g		ON		ON		−1/10	−1/10	−1/18	−1/18
h	ON	ON		ON		−1/30	−1/30	−1/30	−1/30
i	ON	ON			ON	0	0	0	0
j	ON	ON				+1/30	+1/30	+1/30	+1/30
k		ON				+1/10	+1/10	+1/18	+1/18
l						−1/2	−1/2	−1/2	−1/2
m	ON					+1	+1	+1	+1
n	ON		ON			+2	+2	+2	+2
o			ON			+5	+5	+5	+5
p		ON	ON			+11	+11	+11	+11
q	ON	ON	ON			+33	+17	+33	+17

— KEY MATRIX TIMING CHART —

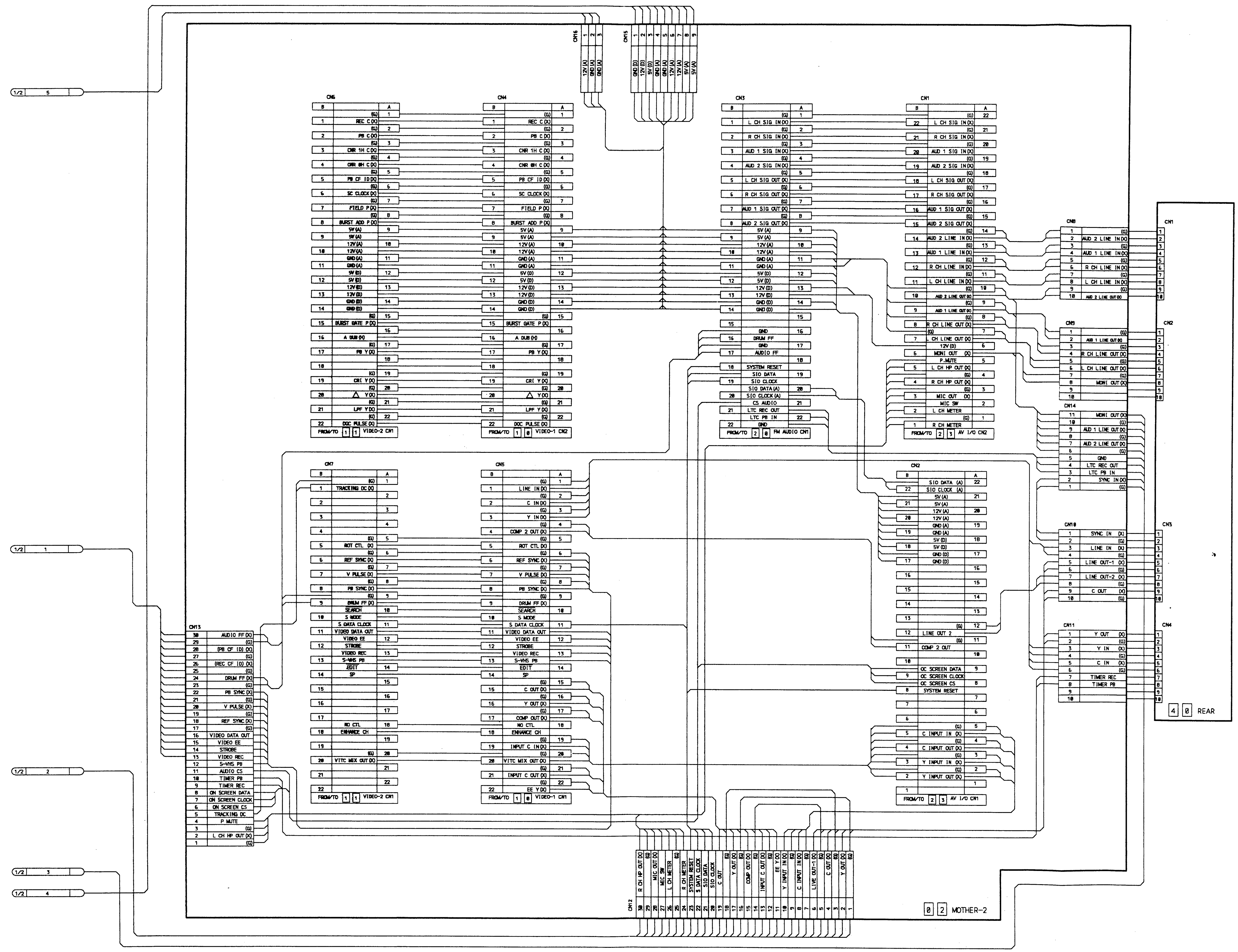

1msec
220μsec(MAX)
14μsec
CLK
IC21-③
DATA
IC21-②
Digi(10H)
Digi(1H)
Digi(10M)
Digi(1M)
Digi(10S)
Digi(1S)
Tally_0
Tally_1
10H
1H
10M
1M
10S
1S

4.12 OVERALL WIRING DIAGRAM

— DIAGRAM (1/2) —

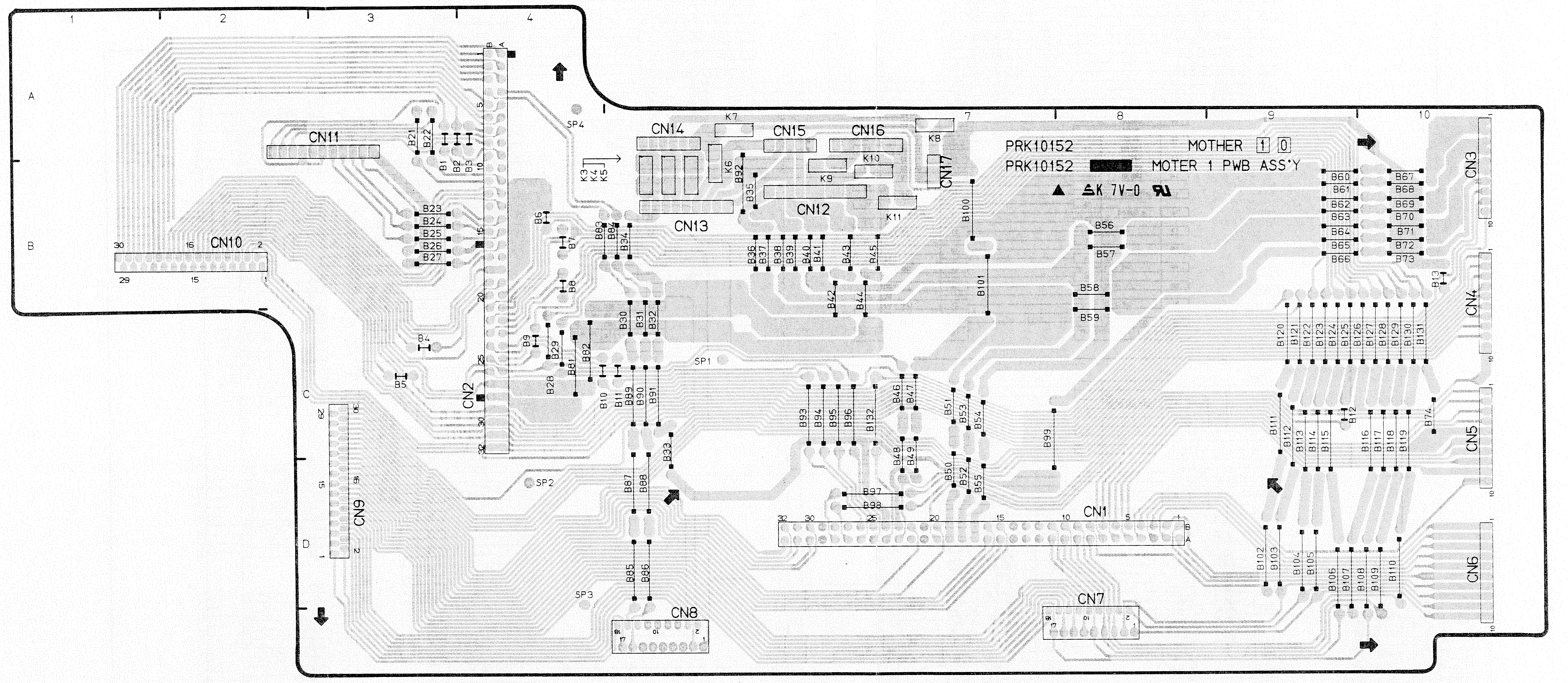

MODE MOTOR
N AUDIO HEAD 1CH
N AUDIO HEAD 2CH
A.ERASE HEAD 1CH
A.ERASE HEAD 2CH
CTL HEAD
DEW SENSOR
CLEANER SOL
PINCH SOL
SUP REEL MOTOR
TU REEL MOTOR
5 5 MECHA TERMINAL
S.F CASS SENSOR
S.CASS SW
2 1 NORMAL AUDIO
2 0 FM AUDIO
FROM/TO 8 2 MOTHER-2 CN3
TENSION SENSOR
5 0
MODE SENSOR
5 4 HOUSING
DRUM MOTOR
CAP MOTOR
FLYING ERASE
A-2
A-1
EP-2
EP-1
SP-2
SP-1
1 2 AV PRE/REC
1 1 VIDEO-2
FROM/TO 8 2 MOTHER2 CN6
FROM/TO 8 2 MOTHER2 CN7
3 0 SERVO/M-CTL
3 5 OPE DIAL
3 2 OP-METER
3 4 OPE-SW
3 3 OP-VR
8 1 MOTHER 1
FROM/TO 3 1 SYSCON CN1
FROM/TO 8 5 SLOT MOTHER CN1
2/2 5
2/2 1
2/2 2
2/2 3
2/2 4
K7
K9
K10
K11
K3
K4
K5
K6
MAIN POWER SW
6 0 REG
6 4 LINE FILTER
YL
BR
BL
LIVE
NEU
TRAL
A
B
C
D
E
F
G
H
6
5
4
3
2
1

— DIAGRAM (2/2) —

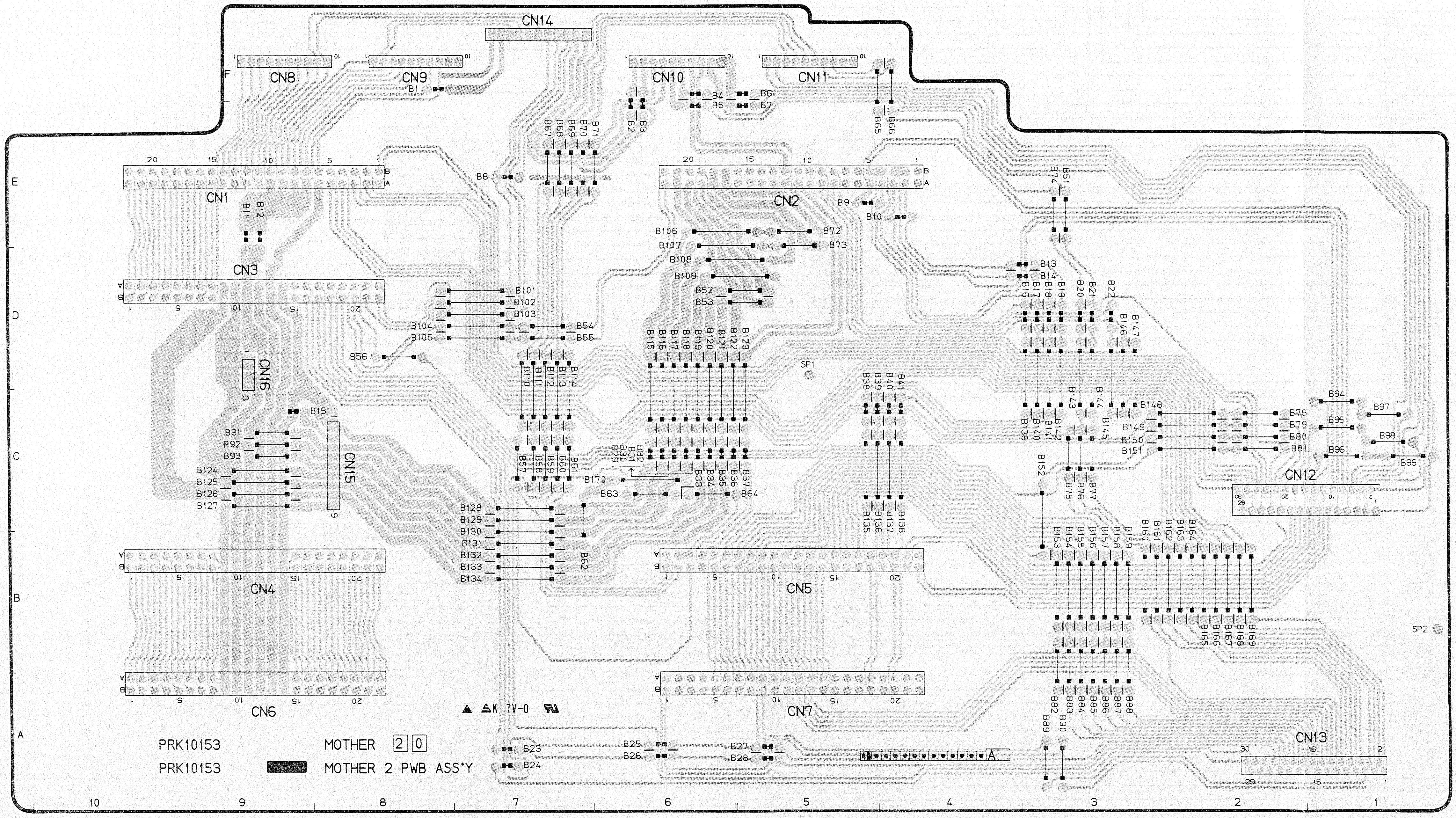


1/2 5
1/2 1
1/2 2
1/2 3
1/2 4
CN16
12V (A)
GND (A)
GND (A)
CN15
GND (D)
12V (D)
5V (D)
GND (A)
GND (A)
12V (A)
5V (A)
5V (A)
CN6
FROM/TO 1 1 VIDEO-2 CN1
CN4
FROM/TO 1 0 VIDEO-1 CN2
CN3
FROM/TO 2 0 FM AUDIO CN1
CN1
FROM/TO 2 3 AV I/O CN2
CN7
FROM/TO 1 1 VIDEO-2 CN1
CN5
FROM/TO 1 0 VIDEO-1 CN1
CN2
FROM/TO 2 3 AV I/O CN1
CN13
CN12
CN8
CN9
CN14
CN10
CN11
CN1
CN2
CN3
CN4
4 0 REAR
0 2 MOTHER-2
A
B
C
E
F
G
H
1
2
3
4
5
6

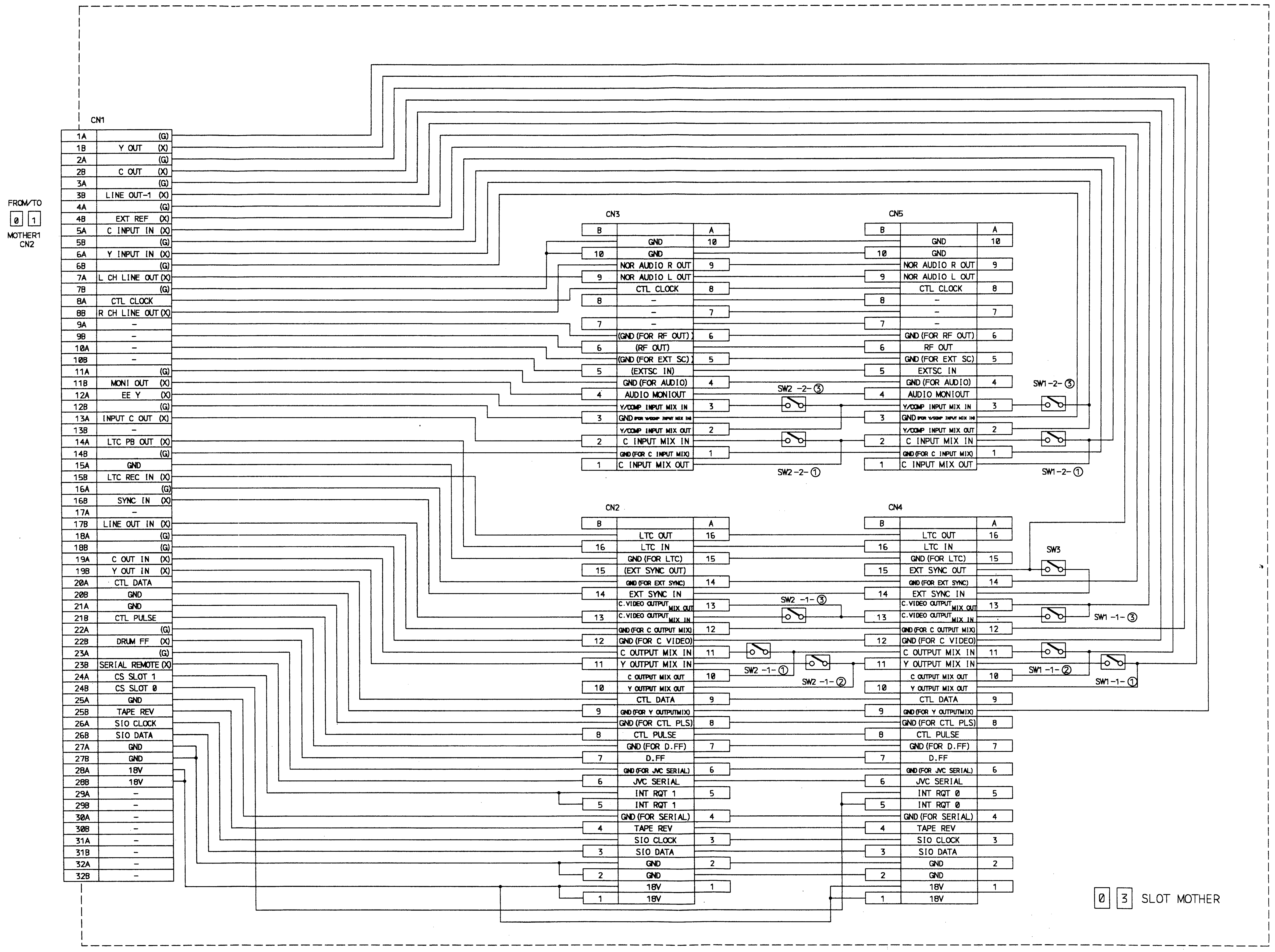
4.13 MOTHER-1 CIRCUIT BOARD
— SOLDER Side —


PRK10152 MOTHER 1 0
PRK10152 [redacted] MOTER 1 PWB ASS'Y
▲ K 7V-0
CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
CN10
CN11
CN12
CN13
CN14
CN15
CN16
CN17
K3 K4 K5 K6 K7 K8 K9 K10 K11
SP1 SP2 SP3 SP4
B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13
B21 B22 B23 B24 B25 B26 B27 B28 B29 B30 B31 B32 B33
B35 B36 B37 B38 B39 B40 B41 B42 B43 B44 B45 B46 B47 B48 B49 B50
B51 B52 B53 B54 B55 B56 B57 B58 B59 B60 B61 B62 B63 B64 B65 B66
B67 B68 B69 B70 B71 B72 B73 B74
B81 B82 B83 B84 B85 B86 B87 B88 B89 B90 B91 B92 B93 B94 B95 B96 B97 B98 B99
B100 B101 B102 B103 B104 B105 B106 B107 B108 B109 B110
B111 B112 B113 B114 B115 B116 B117 B118 B119 B120 B121 B122 B123 B124 B125 B126 B127 B128 B129 B130 B131 B132
1 2 3 4 7 8 9 10
A B C D

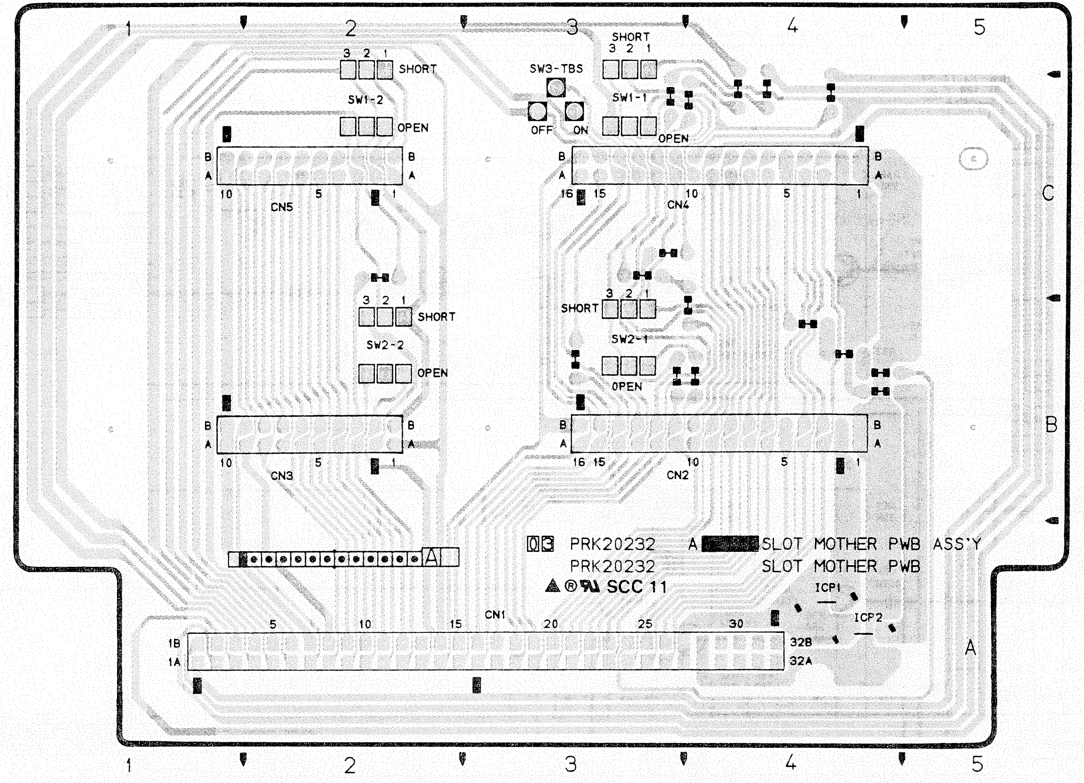
4.14 MOTHER-2 CIRCUIT BOARD
— SOLDER Side —


CN1
CN2
CN3
CN4
CN5
CN6
CN7
CN8
CN9
CN10
CN11
CN12
CN13
CN14
CN15
CN16
SP1
SP2
PRK10153
PRK10153
MOTHER 2 0
MOTHER 2 PWB ASS'Y

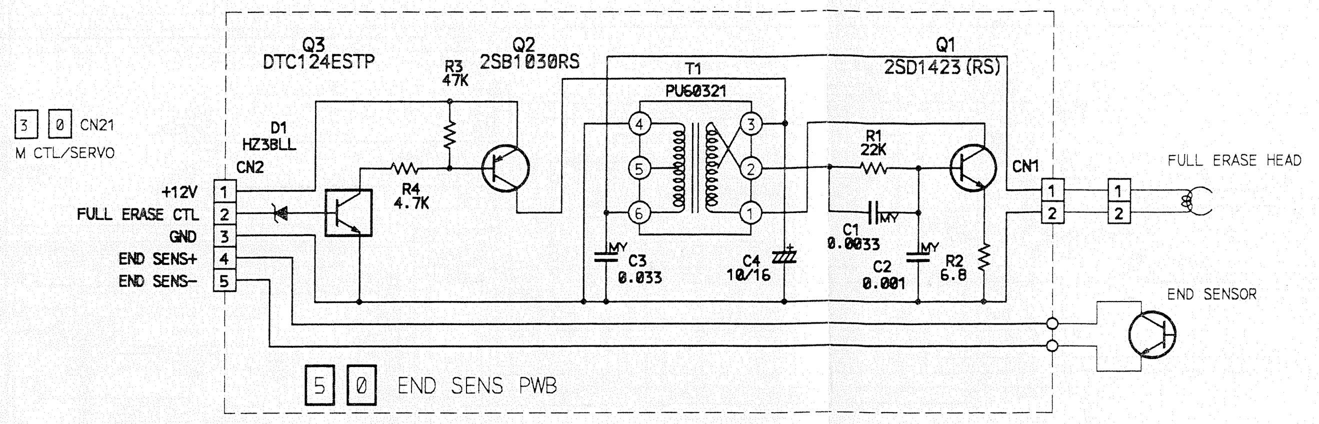
4.15 SLOT MOTHER SCHEMATIC DIAGRAM


FROM/TO
0 1
MOTHER1
CN2
CN1
1A (G)
1B Y OUT (X)
2A (G)
2B C OUT (X)
3A (G)
3B LINE OUT-1 (X)
4A (G)
4B EXT REF (X)
5A C INPUT IN (X)
5B (G)
6A Y INPUT IN (X)
6B (G)
7A L CH LINE OUT (X)
7B (G)
8A CTL CLOCK
8B R CH LINE OUT (X)
9A -
9B -
10A -
10B -
11A (G)
11B MONI OUT (X)
12A EE Y (X)
12B (G)
13A INPUT C OUT (X)
13B -
14A LTC PB OUT (X)
14B (G)
15A GND
15B LTC REC IN (X)
16A (G)
16B SYNC IN (X)
17A -
17B LINE OUT IN (X)
18A (G)
18B (G)
19A C OUT IN (X)
19B Y OUT IN (X)
20A CTL DATA
20B GND
21A GND
21B CTL PULSE
22A (G)
22B DRUM FF (X)
23A (G)
23B SERIAL REMOTE (X)
24A CS SLOT 1
24B CS SLOT 0
25A GND
25B TAPE REV
26A SIO CLOCK
26B SIO DATA
27A GND
27B GND
28A 18V
28B 18V
29A -
29B -
30A -
30B -
31A -
31B -
32A -
32B -
CN3
B A
GND 10
10 GND
NOR AUDIO R OUT 9
9 NOR AUDIO L OUT
CTL CLOCK 8
8 -
- 7
7 -
(GND (FOR RF OUT)) 6
6 (RF OUT)
(GND (FOR EXT SC)) 5
5 (EXTSC IN)
GND (FOR AUDIO) 4
4 AUDIO MONIOUT
Y/COMP INPUT MIX IN 3
3 GND (FOR Y/COMP INPUT MIX IN)
Y/COMP INPUT MIX OUT 2
2 C INPUT MIX IN
GND (FOR C INPUT MIX) 1
1 C INPUT MIX OUT
CN5
B A
GND 10
10 GND
NOR AUDIO R OUT 9
9 NOR AUDIO L OUT
CTL CLOCK 8
8 -
- 7
7 -
GND (FOR RF OUT) 6
6 RF OUT
GND (FOR EXT SC) 5
5 EXTSC IN
GND (FOR AUDIO) 4
4 AUDIO MONIOUT
Y/COMP INPUT MIX IN 3
3 GND (FOR Y/COMP INPUT MIX IN)
Y/COMP INPUT MIX OUT 2
2 C INPUT MIX IN
GND (FOR C INPUT MIX) 1
1 C INPUT MIX OUT
SW2 -2- ③
SW2 -2- ①
SW1 -2- ③
SW1 -2- ①
CN2
B A
LTC OUT 16
16 LTC IN
GND (FOR LTC) 15
15 (EXT SYNC OUT)
GND (FOR EXT SYNC) 14
14 EXT SYNC IN
C.VIDEO OUTPUT MIX OUT 13
13 C.VIDEO OUTPUT MIX IN
GND (FOR C OUTPUT MIX) 12
12 GND (FOR C VIDEO)
C OUTPUT MIX IN 11
11 Y OUTPUT MIX IN
C OUTPUT MIX OUT 10
10 Y OUTPUT MIX OUT
CTL DATA 9
9 GND (FOR Y OUTPUTMIX)
GND (FOR CTL PLS) 8
8 CTL PULSE
GND (FOR D.FF) 7
7 D.FF
GND (FOR JVC SERIAL) 6
6 JVC SERIAL
INT RQT 1 5
5 INT RQT 1
GND (FOR SERIAL) 4
4 TAPE REV
SIO CLOCK 3
3 SIO DATA
GND 2
2 GND
18V 1
1 18V
CN4
B A
LTC OUT 16
16 LTC IN
GND (FOR LTC) 15
15 EXT SYNC OUT
GND (FOR EXT SYNC) 14
14 EXT SYNC IN
C.VIDEO OUTPUT MIX OUT 13
13 C.VIDEO OUTPUT MIX IN
GND (FOR C OUTPUT MIX) 12
12 GND (FOR C VIDEO)
C OUTPUT MIX IN 11
11 Y OUTPUT MIX IN
C OUTPUT MIX OUT 10
10 Y OUTPUT MIX OUT
CTL DATA 9
9 GND (FOR Y OUTPUTMIX)
GND (FOR CTL PLS) 8
8 CTL PULSE
GND (FOR D.FF) 7
7 D.FF
GND (FOR JVC SERIAL) 6
6 JVC SERIAL
INT RQT 0 5
5 INT RQT 0
GND (FOR SERIAL) 4
4 TAPE REV
SIO CLOCK 3
3 SIO DATA
GND 2
2 GND
18V 1
1 18V
SW3
SW2 -1- ③
SW1 -1- ③
SW2 -1- ①
SW2 -1- ②
SW1 -1- ②
SW1 -1- ①
0 3 SLOT MOTHER

4.16 SLOT MOTHER CIRCUIT BOARD
— SOLDER Side —

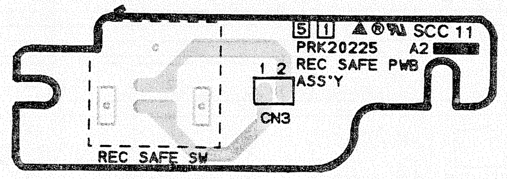

1
2
3
4
5
SHORT
SW1-2
OPEN
SW3-TBS
OFF
ON
SW1-1
CN5
CN4
SW2-2
SW2-1
CN3
CN2
PRK20232 A SLOT MOTHER PWB ASS'Y
PRK20232 SLOT MOTHER PWB
SCC 11
CN1
ICP1
ICP2
1B
1A
32B
32A
A
B
C

4.18 END SENSOR SCHEMATIC DIAGRAM

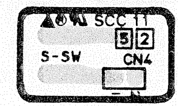

Q3
DTC124ESTP
R3
47K
Q2
2SB1030RS
T1
PU60321
Q1
2SD1423(RS)
CN21
M CTL/SERVO
D1
HZ3BLL
CN2
+12V
FULL ERASE CTL
GND
END SENS+
END SENS-
R4
4.7K
R1
22K
C1
0.0033
C3
0.033
C4
10/16
C2
0.001
R2
6.8
CN1
FULL ERASE HEAD
END SENSOR
END SENS PWB

4.19 REC SAFE SW, S-SWITCH, MODE MOTOR, M-TERMINAL, A/C HEAD, C. HOUSING CIRCUIT BOARD

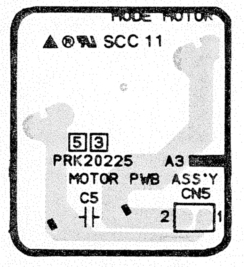
— REC SAFE SW —
— SOLDER Side —


SCC 11
PRK20225 A2
REC SAFE PWB ASS'Y
CN3
REC SAFE SW

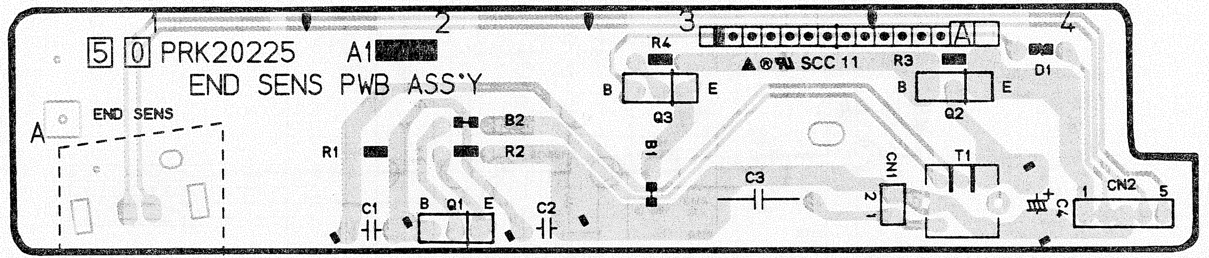
— S. SWITCH —
— SOLDER Side —


SCC 11
S-SW
CN4

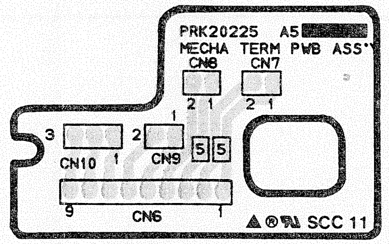
— MODE MOTOR —
— SOLDER Side —


MODE MOTOR
SCC 11
PRK20225 A3
MOTOR PWB ASS'Y
C5
CN5

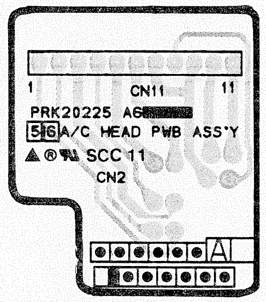
4.17 END SENSOR CIRCUIT BOARD
— SOLDER Side —


PRK20225 A1
END SENS PWB ASS'Y
END SENS
SCC 11
R4
R3
Q3
Q2
D1
B2
R2
R1
B1
CN1
T1
C3
C1
Q1
C2
C4
CN2

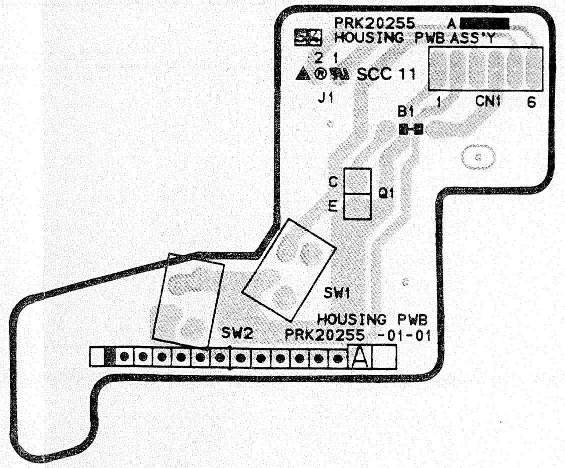
— M-TERMINAL —
— SOLDER Side —


PRK20225 A5
MECHA TERM PWB ASS'Y
CN8
CN7
CN10
CN9
CN6
SCC 11

— A/C HEAD —
— SOLDER Side —

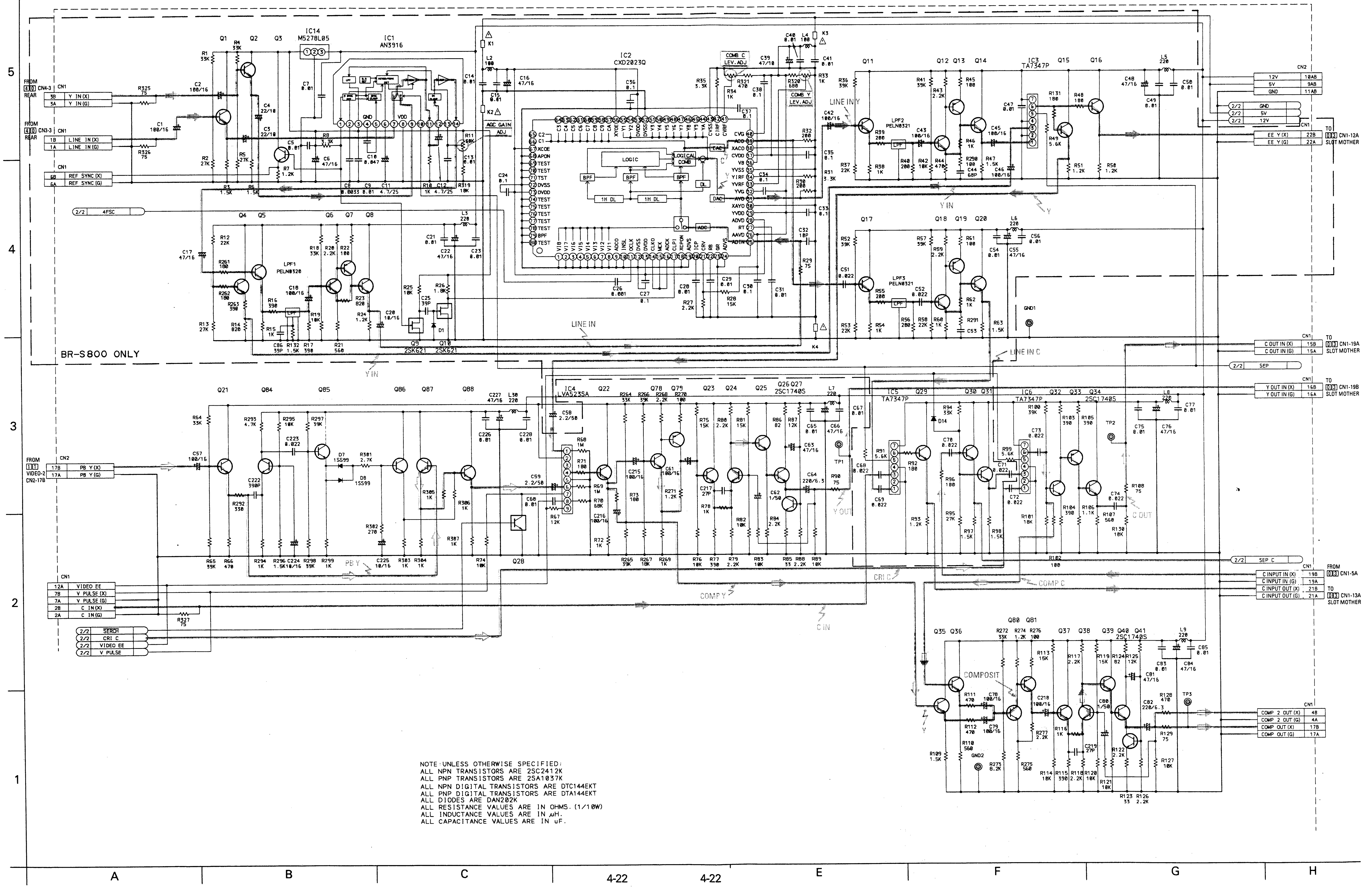

CN11
PRK20225 A6
A/C HEAD PWB ASS'Y
SCC 11
CN2

— C. HOUSING —
— SOLDER Side —


PRK20255 A
HOUSING PWB ASS'Y
SCC 11
J1
CN1
B1
Q1
SW1
SW2
HOUSING PWB
PRK20255 -01-01

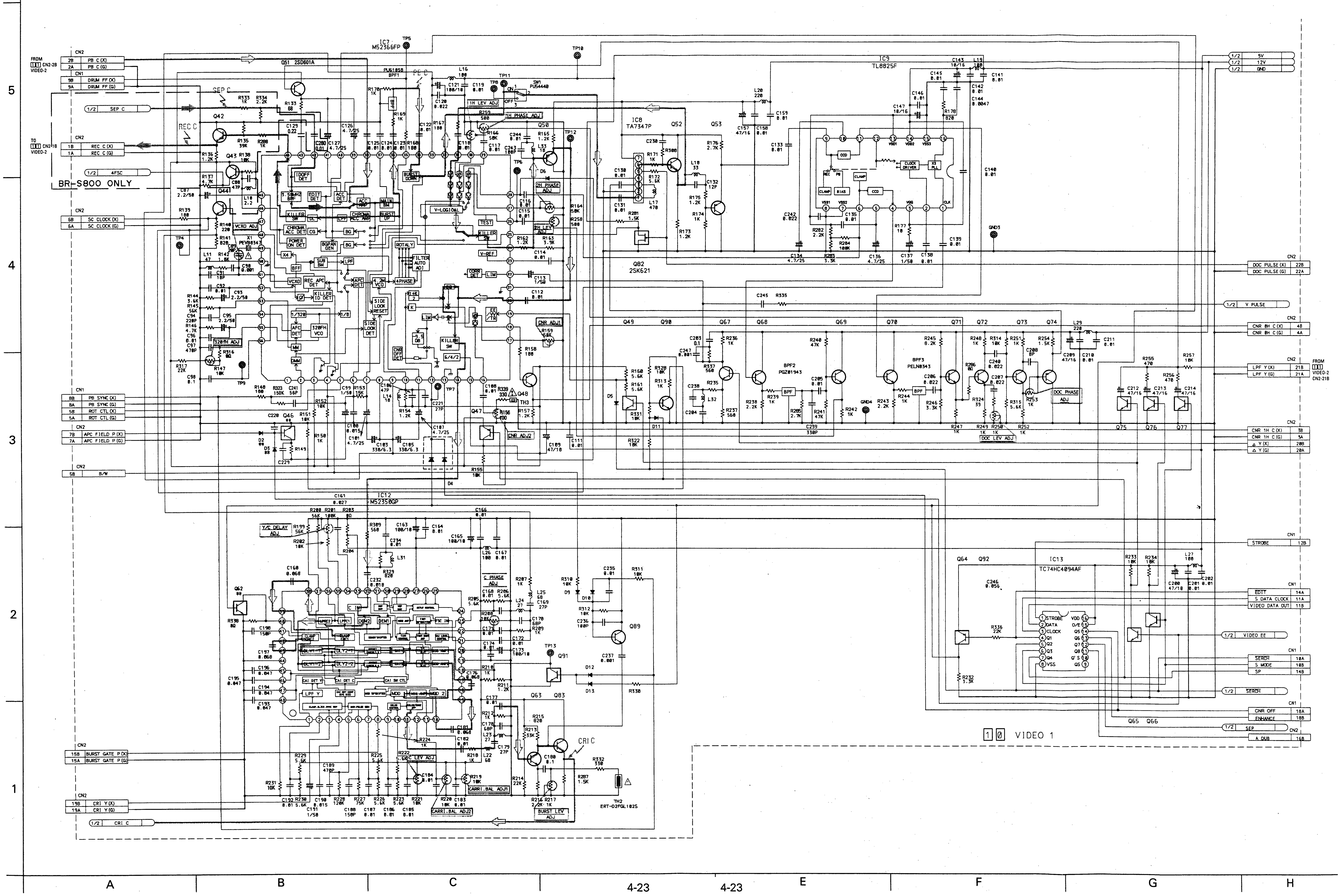
4.20 VIDEO-1 SCHEMATIC DIAGRAM

— DIAGRAM (1/2) —


6
5
4
3
2
1
A
B
C
E
F
G
H
IC14 M5278L05
IC1 AN3916
IC2 CXD2023Q
IC3 TA7347P
IC4 LVA523SA
IC5 TA7347P
IC6 TA7347P
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9 2SK621
Q10 2SK621
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q25
Q26 Q27 2SC1740S
Q28
Q29
Q30
Q31
Q32 Q33 Q34 2SC1740S
Q35
Q36
Q37
Q38
Q39 Q40 Q41 2SC1740S
Q78
Q79
Q80 Q81
Q84
Q85
Q86
Q87
Q88
FROM CN4-3 REAR
FROM CN3-3 REAR
CN1
5B Y IN (X)
5A Y IN (G)
1B LINE IN (X)
1A LINE IN (G)
6B REF SYNC (X)
6A REF SYNC (G)
2/2 4FSC
BR-S800 ONLY
LPF1 PELN0320
LPF2 PELN0321
LPF3 PELN0321
AGC GAIN ADJ
COMB C LEV. ADJ
COMB Y LEV. ADJ
LOGIC
LOGICAL COMB
BPF
1H DL
DL
DAC
ADC
LINE IN
LINE IN Y
LINE IN C
Y IN
Y
GND1
CN2
12V 10AB
5V 9AB
GND 11AB
2/2 GND
2/2 5V
2/2 12V
EE Y (X) 22B
EE Y (G) 22A
TO CN1-12A SLOT MOTHER
C OUT IN (X) 15B
C OUT IN (G) 15A
TO CN1-19A SLOT MOTHER
2/2 SEP
Y OUT IN (X) 16B
Y OUT IN (G) 16A
TO CN1-19B SLOT MOTHER
FROM VIDEO-2 CN2-17B
17B PB Y (X)
17A PB Y (G)
PB Y
Y OUT
C OUT
TP1
TP2
TP3
2/2 SEP C
C INPUT IN (X) 19B
C INPUT IN (G) 19A
C INPUT OUT (X) 21B
C INPUT OUT (G) 21A
FROM CN1-5A
TO CN1-13A SLOT MOTHER
12A VIDEO EE
7B V PULSE (X)
7A V PULSE (G)
2B C IN (X)
2A C IN (G)
2/2 SERCH
2/2 CRI C
2/2 VIDEO EE
2/2 V PULSE
COMP Y
CRI C
COMP C
C IN
COMPOSIT
GND2
COMP 2 OUT (X) 4B
COMP 2 OUT (G) 4A
COMP OUT (X) 17B
COMP OUT (G) 17A

NOTE: UNLESS OTHERWISE SPECIFIED:
ALL NPN TRANSISTORS ARE 2SC2412K
ALL PNP TRANSISTORS ARE 2SA1037K
ALL NPN DIGITAL TRANSISTORS ARE DTC144EKT
ALL PNP DIGITAL TRANSISTORS ARE DTA144EKT
ALL DIODES ARE DAN202K
ALL RESISTANCE VALUES ARE IN OHMS. (1/10W)
ALL INDUCTANCE VALUES ARE IN μH.
ALL CAPACITANCE VALUES ARE IN uF.

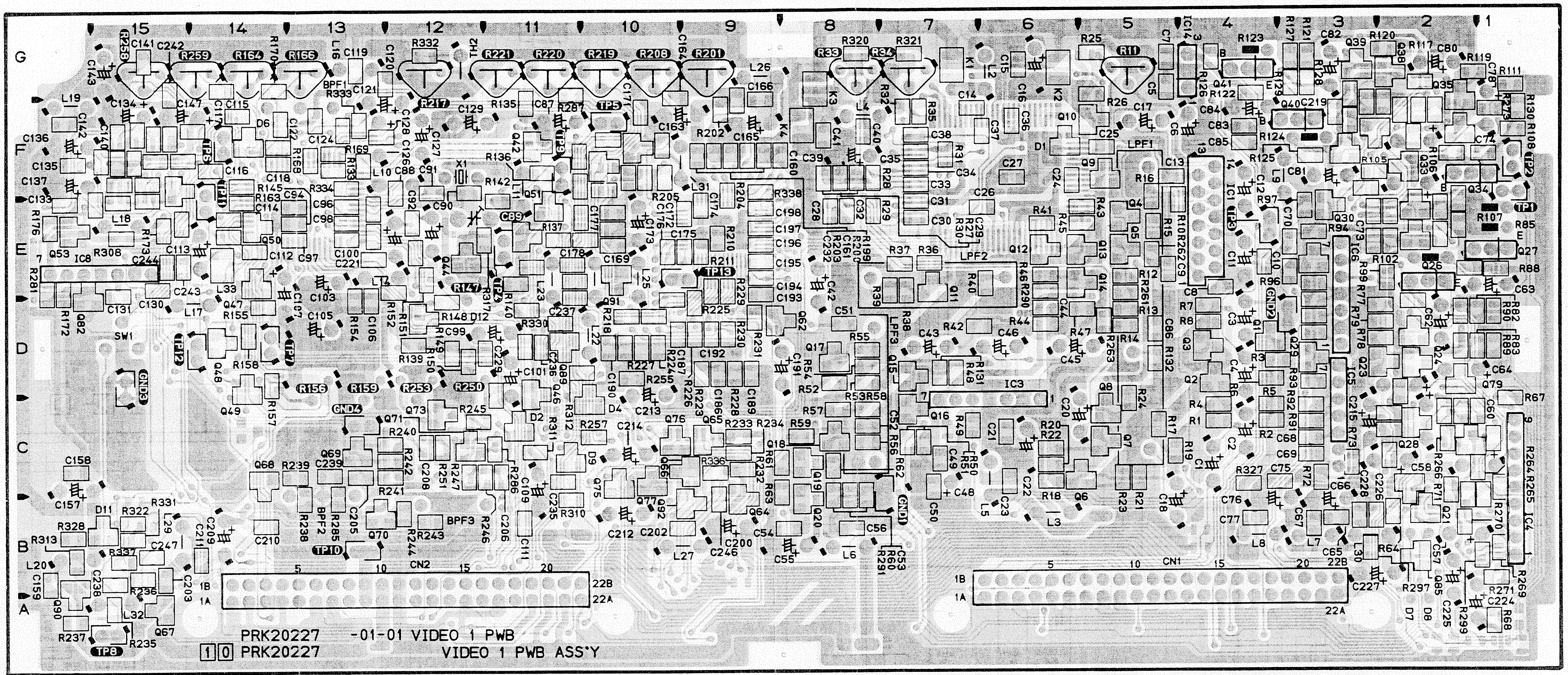
— DIAGRAM (2/2) —



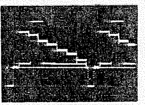
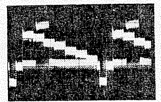
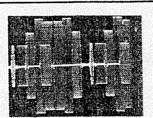
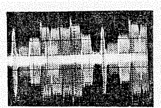
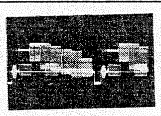
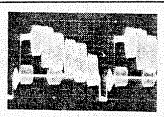
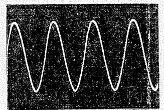
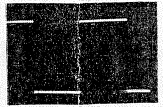
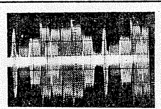
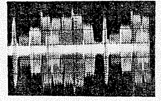
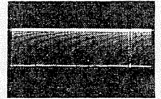
6
5
4
3
2
1
A
B
C
D
E
F
G
H
FROM CN2-2B VIDEO-2
TO CN2-1B VIDEO-2
BR-S800 ONLY
CN2
2B PB C (X)
2A PB C (G)
CN1
9B DRUM FF (X)
9A DRUM FF (G)
1/2 SEP C
SEP C
REC C
1B REC C (X)
1A REC C (G)
1/2 4FSC
6B SC CLOCK (X)
6A SC CLOCK (G)
8B PB SYNC (X)
8A PB SYNC (G)
5B ROT CTL (X)
5A ROT CTL (G)
7B APC FIELD P (X)
7A APC FIELD P (G)
5B B/W
15B BURST GATE P (X)
15A BURST GATE P (G)
19B CRI Y (X)
19A CRI Y (G)
1/2 CRI C
IC7 M52366FP
Q51 2SD601A
Q42
Q43
Q44
IC8 TA7347P
Q52
Q53
Q82 2SK621
IC9 TL0825F
1/2 5V
1/2 12V
1/2 GND
DOC PULSE (X) 22B
DOC PULSE (G) 22A
1/2 V PULSE
CNR 0H C (X) 4B
CNR 0H C (G) 4A
LPF Y (X) 21B
LPF Y (G) 21A
FROM VIDEO-2 CN2-21B
CNR 1H C (X) 3B
CNR 1H C (G) 3A
Δ Y (X) 20B
Δ Y (G) 20A
STROBE 12B
EDIT 14A
S DATA CLOCK 11A
VIDEO DATA OUT 11B
1/2 VIDEO EE
SERCH 10A
S MODE 10B
SP 14B
1/2 SERCH
CNR OFF 18A
ENHANCE 18B
1/2 SEP
A DUB 16B
IC12 M52350GP
IC13 TC74HC4094AF
Y/C DELAY ADJ
C PHASE ADJ
C LEV ADJ
CARRI.BAL ADJ1
CARRI.BAL ADJ2
BURST LEV ADJ
1H LEV ADJ
1H PHASE ADJ
2H PHASE ADJ
2H LEV ADJ
CNR ADJ1
CNR ADJ2
DOC PHASE ADJ
DOC LEV ADJ
VCXO ADJ
320FH ADJ
PU61058 BPF1
BPF2 PGZ01943
BPF3 PELN0343
SW1 PU54440
TH2 ERT-D2FGL102S
X1 PEV00347
CRI C
Q46 Q47 Q48 Q49 Q50 Q62 Q63 Q64 Q65 Q66 Q67 Q68 Q69 Q70 Q71 Q72 Q73 Q74 Q75 Q76 Q77 Q83 Q89 Q90 Q91 Q92
TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13
GND3 GND4
1 0 VIDEO 1

4.21 VIDEO-1 CIRCUIT BOARD

— SOLDER Side —


PRK20227 -01-01 VIDEO 1 PWB
PRK20227 VIDEO 1 PWB ASS'Y
CN1
CN2
IC3
IC4
LPF1
LPF2
BPF1
BPF2
BPF3
SW1
TP1
TP2
TP3
TP4
TP5
TP8
TP10
TP11
TP12
TP13
1A
1B
22A
22B

— MAIN WAVEFORMS OF VIDEO-1 CIRCUIT —

TP1		TP2		TP3		TP4	TP5	TP11	TP12	TP13
 [REC] 2.1 Vp-p	 [PB] 2.0 Vp-p	 [REC] 641 mV (Burst level)	 [PB] 624 mV (Burst level)	 [REC] 2.1 Vp-p	 [PB] 2.0 Vp-p	 0.7 Vp-p (3.58 MHz)	 4.4 Vp-p (30 Hz)	 [PB] 460 mV (Burst level)	 [PB] 280 mV (burst level)	 2.6 Vp-p (60 Hz)

— DC Voltage (1/2) —

SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC1	1	4.5	4.4
	2	3.0	3.0
	3	5.1	5.1
	4	1.9	1.9
	5	1.6	1.6
	6	0.0	2.2
	7	2.9	2.9
	8	0.0	0.0
	9	2.9	2.9
	10	0.0	0.0
	11	2.6	2.6
	12	3.1	3.1
	13	3.2	3.2
	14	2.1	2.1
IC2	1	0.0	0.0
	2	0.0	0.0
	3	0.0	—
	4	0.0	0.0
	5	0.0	0.0
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.0
	10	0.0	0.0
	11	2.5	2.5
	12	0.0	0.0
	13	5.1	5.1
	14	1.5	1.5
	15	1.5	1.5
	16	1.5	1.5
	17	4.8	5.1
	18	0.0	0.0
	19	0.0	0.0
	20	2.6	2.6
	21	0.7	0.7
	22	0.6	0.0
	23	0.0	0.0
	24	0.0	0.0
	25	1.4	1.4
	26	5.1	5.1
	27	2.7	2.7
	28	5.1	5.1
	29	5.1	5.1
	30	0.0	0.0
	31	0.4	0.0
	32	3.7	3.7
	33	1.0	1.0
	34	1.0	1.0
	35	0.0	0.0
	36	1.2	1.2
	37	5.1	5.1
	38	0.0	0.0
	39	0.5	0.5
	40	0.0	3.7
	41	1.0	1.0
	42	1.1	1.1
	43	0.0	—
	44	0.0	1.7
	45	0.0	1.8
	46	0.0	1.7
	47	0.0	—
	48	0.0	—
	49	0.0	2.0
	50	0.0	—
	51	0.0	1.7
	52	0.0	0.0
	53	5.1	5.1
	54	0.0	1.0
	55	0.0	0.0
	56	5.1	5.1
	57	0.0	0.0
	58	0.0	0.0
	59	0.0	0.0
	60	0.0	0.0
	61	0.0	0.0
	62	0.0	0.0
	63	0.0	—
	64	0.0	0.0
	65	0.0	0.0
	66	0.0	0.0
	67	5.1	5.1
	68	0.0	0.0
	69	0.0	0.0
	70	0.0	0.0
	71	0.0	0.0
	72	0.0	0.0
	73	5.1	5.1
	74	0.0	0.0
	75	0.0	0.0
	76	0.0	0.0
	77	0.0	0.0
	78	0.0	0.0
	79	0.0	0.0
	80	0.0	0.0
IC3	1	8.3	8.3
	2	0.0	0.0
	3	8.3	8.3
	4	0.0	0.0
	5	0.0	0.0
	6	7.5	7.5
	7	11.9	11.9
IC4	1	4.8	4.8
	2	11.7	11.7
	3	4.1	0.8
	4	4.1	4.1
	5	0.0	0.0
	6	4.3	4.7
	7	0.0	0.0
	8	4.3	4.3
	9	3.0	0.0
IC5	1	8.2	8.3
	2	0.0	0.0
	3	8.3	8.3
	4	0.0	0.0
	5	0.0	0.0
	6	7.5	7.5
	7	11.8	11.9
IC6	1	8.3	8.3
	2	0.0	0.0
	3	8.2	8.3
	4	0.0	0.0
	5	4.8	0.0
	6	7.5	7.5
	7	11.8	11.9
IC7	1	0.0	0.0
	2	0.5	0.5
	3	0.6	0.6
	4	0.4	0.4
	5	2.6	2.6
	6	0.0	3.6
	7	3.6	3.6
	8	5.1	5.0
	9	5.1	0.0
	10	5.1	5.0
	11	3.4	3.4
	12	4.2	2.8
	13	0.0	0.0
	14	4.6	2.4
	15	0.1	0.1
	16	4.0	3.8
	17	3.5	3.5
	18	4.5	3.1
	19	5.1	2.5
	20	4.0	2.8
	21	0.0	0.0
	22	1.6	1.6
	23	3.1	3.5
	24	4.3	2.7
	25	5.3	5.3
	26	3.1	3.5
	27	3.7	3.6
	28	4.5	2.7
	29	3.1	3.5
	30	2.9	2.8
	31	3.1	3.5
	32	2.5	2.5
	33	5.1	5.0
	34	3.8	3.7
	35	2.4	2.4
	36	2.0	2.0
	37	3.1	3.0
	38	4.2	4.2
	39	2.6	2.6
	40	2.4	2.4
	41	2.6	2.6
	42	3.1	3.1
	43	2.6	2.6
	44	2.8	2.3
	45	3.2	3.1
	46	5.1	5.0
	47	0.0	0.0
	48	1.9	2.1
	49	3.0	3.4
	50	0.0	0.0
	51	4.0	4.0
	52	0.0	4.0
	53	0.0	2.1
	54	3.8	3.6
	55	3.4	3.4
	56	2.0	3.8
IC8	1	8.3	8.3
	2	0.0	0.0
	3	8.3	8.3
	4	0.0	0.0
	5	0.0	0.0
	6	7.5	7.6
	7	11.9	12.0
IC9	1	2.6	2.6
	2	2.9	2.9
	3	11.2	10.6
	4	3.4	3.4
	5	2.0	1.8
	6	2.9	3.2
	7	0.0	0.0
	8	0.0	0.0
	9	2.6	2.7
	10	1.9	1.7
	11	3.4	3.4
	12	5.1	5.1
	13	5.2	5.2
	14	5.2	5.2
	15	0.0	0.0
	16	1.7	1.7
IC12	1	2.8	2.8
	2	2.5	2.5
	3	2.5	2.9
	4	2.6	2.3
	5	2.4	2.5
	6	2.6	2.6
	7	2.5	2.5
	8	2.2	1.9
	9	2.5	2.5
	10	2.6	0.0
	11	1.7	1.7
	12	1.5	0.0
	13	3.0	3.0
	14	2.9	2.9
	15	2.0	2.0
	16	2.9	3.0
	17	2.0	2.1
	18	2.3	2.3
	19	0.0	0.0
	20	4.9	4.9
	21	2.8	2.8
	22	2.7	2.7
	23	0.0	2.5
	24	1.4	1.4
	25	2.4	2.4
	26	1.6	1.6
	27	4.9	4.9
	28	1.1	0.0
	29	0.0	0.0
	30	2.1	2.3
	31	—	—
	32	2.9	2.9
	33	0.0	0.0
	34	2.9	2.9
	35	2.8	2.8
	36	2.8	2.8
	37	2.8	2.8
	38	2.3	2.4
	39	3.6	3.6
	40	0.0	0.0
	41	2.2	2.2
	42	2.3	2.3
	43	3.6	3.6
	44	0.0	0.0
	45	3.1	3.1
	46	3.1	3.1
	47	3.1	3.1
	48	3.1	3.1
IC13	1	5.2	5.2
	2	0.0	0.0
	3	0.0	0.0
	4	5.2	5.3
	5	5.2	5.2
	6	5.2	5.2
	7	5.2	5.2
	8	0.0	0.0
	9	0.0	0.0
	10	0.0	0.0
	11	0.0	0.0
	12	0.0	0.0
	13	5.2	5.3
	14	5.3	5.3
	15	5.3	5.3
	16	5.3	5.3
IC14	1	.	.
	2	.	.
	3	.	.
TRANSISTOR			
Q1	B	2.2	1.7
	C	5.1	5.1
	E	1.7	2.2
Q2	B	2.2	1.6
	C	5.1	5.1
	E	1.6	2.2
Q3	B	4.5	4.5
	C	5.1	5.1
	E	4.0	4.0
Q4	B	6.0	6.0
	C	11.9	11.9
	E	5.4	5.4
Q5	B	6.0	6.0
	C	11.9	11.9
	E	5.4	5.3
Q6	B	2.8	2.8
	C	11.0	11.0
	E	2.2	2.2
Q7	B	11.0	11.0
	C	5.0	4.9
	E	11.6	11.6
Q8	B	5.0	4.9
	C	11.9	11.9
	E	4.3	4.3
Q9	B	4.5	4.5
	C	0.2	0.2
	E	0.0	0.0
Q10	B	0.0	0.1
	C	4.8	4.8
	E	0.0	0.0
Q11	B	3.9	3.9
	C	11.9	11.9
	E	3.3	3.3
Q12	B	2.5	2.5
	C	10.9	10.9
	E	1.9	1.9
Q13	B	10.9	10.9
	C	5.4	5.4
	E	11.5	11.5
Q14	B	5.4	5.4
	C	11.9	11.9
	E	4.8	4.8
Q15	B	7.5	7.5
	C	11.9	11.9
	E	6.8	6.8
Q16	B	7.5	7.5
	C	11.9	11.9
	E	6.8	6.8
Q17	B	3.9	3.9
	C	12.0	12.0
	E	3.3	3.3
Q18	B	2.9	2.9
	C	11.1	11.2
	E	2.4	2.3

— DC Voltage (2/2) —

SYMBOL	No.	REC	PB
Q19	B	11.1	11.2
	C	6.5	6.5
	E	11.8	11.8
Q20	B	6.5	6.5
	C	12.0	12.0
	E	5.9	5.9
Q21	B	5.8	5.8
	C	11.7	11.7
	E	5.2	5.2
Q22	B	4.1	4.1
	C	11.7	11.7
	E	3.5	3.5
Q23	B	4.5	4.5
	C	11.7	11.7
	E	3.9	3.9
Q24	B	4.6	4.6
	C	7.4	7.4
	E	4.0	4.0
Q25	B	.	.
	C	.	.
	E	.	.
Q26	B	6.8	6.8
	C	9.3	9.3
	E	6.1	6.1
Q27	B	1.7	1.7
	C	6.1	6.1
	E	1.0	1.0
Q28	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q29	B	7.5	7.5
	C	11.8	11.9
	E	6.8	6.9
Q30	B	5.0	0.5
	C	11.8	11.9
	E	4.4	0.1
Q31	B	5.0	0.5
	C	11.8	11.9
	E	4.4	0.1
Q32	B	.	.
	C	.	.
	E	.	.
Q33	B	9.7	9.1
	C	5.9	5.9
	E	9.1	9.8
Q34	B	5.9	6.0
	C	11.8	11.9
	E	5.3	5.3
Q35	B	6.1	6.1
	C	11.8	11.8
	E	5.5	5.5
Q36	B	.	.
	C	.	.
	E	.	.
Q37	B	.	.
	C	.	.
	E	.	.
Q38	B	4.6	4.6
	C	7.6	7.6
	E	4.0	4.0
Q39	B	7.5	7.6
	C	11.8	11.8
	E	7.2	7.2
Q40	B	7.2	7.2
	C	9.3	9.2
	E	6.3	6.3

SYMBOL	No.	REC	PB
Q41	B	1.7	1.7
	C	6.3	6.3
	E	1.0	1.0
Q42	B	2.2	2.2
	C	0.0	0.0
	E	2.9	2.8
Q43	B	.	.
	C	.	.
	E	.	.
Q44	B	2.1	2.1
	C	5.1	5.0
	E	1.5	1.5
Q46	B	4.6	0.0
	C	0.0	0.0
	E	0.0	0.0
Q47	B	.	.
	C	.	.
	E	.	.
Q48	B	4.5	3.0
	C	5.1	5.0
	E	3.9	2.4
Q49	B	0.0	3.8
	C	5.1	0.0
	E	0.0	0.0
Q50	B	3.3	2.1
	C	0.0	0.0
	E	4.0	2.7
Q51	B	1.8	1.9
	C	5.1	5.1
	E	1.2	1.2
Q52	B	7.5	7.5
	C	11.9	12.0
	E	6.9	6.9
Q53	B	3.1	3.1
	C	0.0	0.0
	E	3.8	3.8
Q63	B	.	.
	C	.	.
	E	.	.
Q64	B	5.2	5.2
	C	2.4	2.4
	E	5.3	5.3
Q65	B	5.1	5.1
	C	0.0	0.0
	E	0.0	0.0
Q66	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q67	B	2.8	2.8
	C	8.1	8.2
	E	2.1	2.2
Q68	B	3.4	3.4
	C	11.9	11.9
	E	2.8	3.0
Q69	B	5.0	5.1
	C	11.9	11.9
	E	4.4	4.5
Q70	B	3.4	3.4
	C	11.9	11.9
	E	2.8	2.8
Q71	B	3.4	3.4
	C	11.9	11.9
	E	2.7	2.8
Q72	B	2.8	2.7
	C	9.8	9.8
	E	2.1	2.1

SYMBOL	No.	REC	PB
Q73	B	4.2	4.3
	C	8.3	8.3
	E	3.6	3.7
Q74	B	3.6	3.6
	C	0.0	0.0
	E	4.3	4.3
Q75	B	0.0	3.8
	C	2.1	0.0
	E	0.0	0.0
Q76	B	0.0	0.0
	C	1.6	1.3
	E	0.0	0.0
Q77	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q78	B	.	.
	C	.	.
	E	.	.
Q79	B	.	.
	C	.	.
	E	.	.
Q80	B	.	.
	C	.	.
	E	.	.
Q81	B	.	.
	C	.	.
	E	.	.
Q82	B	0.0	0.0
	C	5.3	5.3
	E	0.0	0.0
Q83	B	.	.
	C	.	.
	E	.	.
Q84	B	1.6	1.0
	C	7.5	7.5
	E	1.0	1.6
Q85	B	5.6	5.6
	C	12.0	12.0
	E	5.0	5.0
Q86	B	4.9	4.9
	C	12.0	12.0
	E	4.3	4.3
Q87	B	5.2	5.2
	C	12.0	12.0
	E	4.6	4.6
Q88	B	4.4	4.4
	C	12.0	12.0
	E	3.8	3.8
Q89	B	0.0	0.1
	C	0.0	0.0
	E	0.0	0.0
Q90	B	0.7	0.7
	C	0.0	0.0
	E	0.0	0.0
Q91	B	1.4	1.7
	C	2.3	2.3
	E	0.0	0.0
CONNECTOR			
CN1	1A	0.0	0.0
	1B	0.0	0.0
	2A	0.0	0.0
	2B	0.0	0.0
	3A	0.0	0.0
	3B	0.0	0.0
	4A	0.0	0.0
	4B	0.0	0.0
	5A	0.0	0.0
	5B	2.6	2.6
	6A	0.0	0.0
	6B	4.1	4.1

SYMBOL	No.	REC	PB
	7A	0.0	0.0
	7B	0.2	0.2
	8A	0.0	0.0
	8B	0.5	0.5
	9A	0.0	0.0
	9B	2.4	2.4
	10A	5.2	5.2
	10B	5.2	5.2
	11A	0.0	0.0
	11B	0.0	0.0
	12A	0.6	1.9
	12B	5.2	5.2
	13A	5.1	0.0
	13B	4.1	4.1
	14A	5.2	5.2
	14B	5.2	5.2
	15A	0.0	0.0
	15B	0.0	0.0
	16A	0.0	0.0
	16B	0.0	0.0
	17A	0.0	0.0
	17B	0.0	0.0
	18A	5.3	5.3
	18B	5.2	5.2
	19A	0.0	0.0
	19B	6.8	6.9
	20A	0.0	0.0
	20B	6.8	6.9
	21A	0.0	0.0
	21B	6.8	6.9
	22A	0.0	0.0
	22B	6.8	6.9
CN2	1A	0.0	0.0
	1B	2.9	2.8
	2A	0.0	0.0
	2B	4.1	4.1
	3A	0.0	0.0
	3B	2.7	2.7
	4A	0.0	0.0
	4B	3.9	2.5
	5A	2.2	0.0
	5B	0.4	0.4
	6A	0.0	0.0
	6B	1.4	1.3
	7A	0.0	0.0
	7B	1.8	0.0
	8A	2.2	0.0
	8B	2.0	0.0
	9A	5.3	5.3
	9B	5.3	5.3
	10A	12.0	12.1
	10B	12.0	12.1
	11A	0.0	0.0
	11B	0.0	0.0
	12A	5.2	5.2
	12B	5.2	5.2
	13A	12.9	12.9
	13B	12.9	12.9
	14A	0.0	0.0
	14B	0.0	0.0
	15A	0.0	0.0
	15B	1.7	1.8
	16A	2.4	0.0
	16B	0.0	0.0
	17A	0.0	0.0
	17B	7.2	7.2
	18A	2.4	—
	18B	2.4	—
	19A	0.0	0.0
	19B	4.3	4.3
	20A	0.0	0.0
	20B	2.8	2.8
	21A	0.0	0.0
	21B	2.0	2.0
	22A	0.0	0.0
	22B	0.0	0.0

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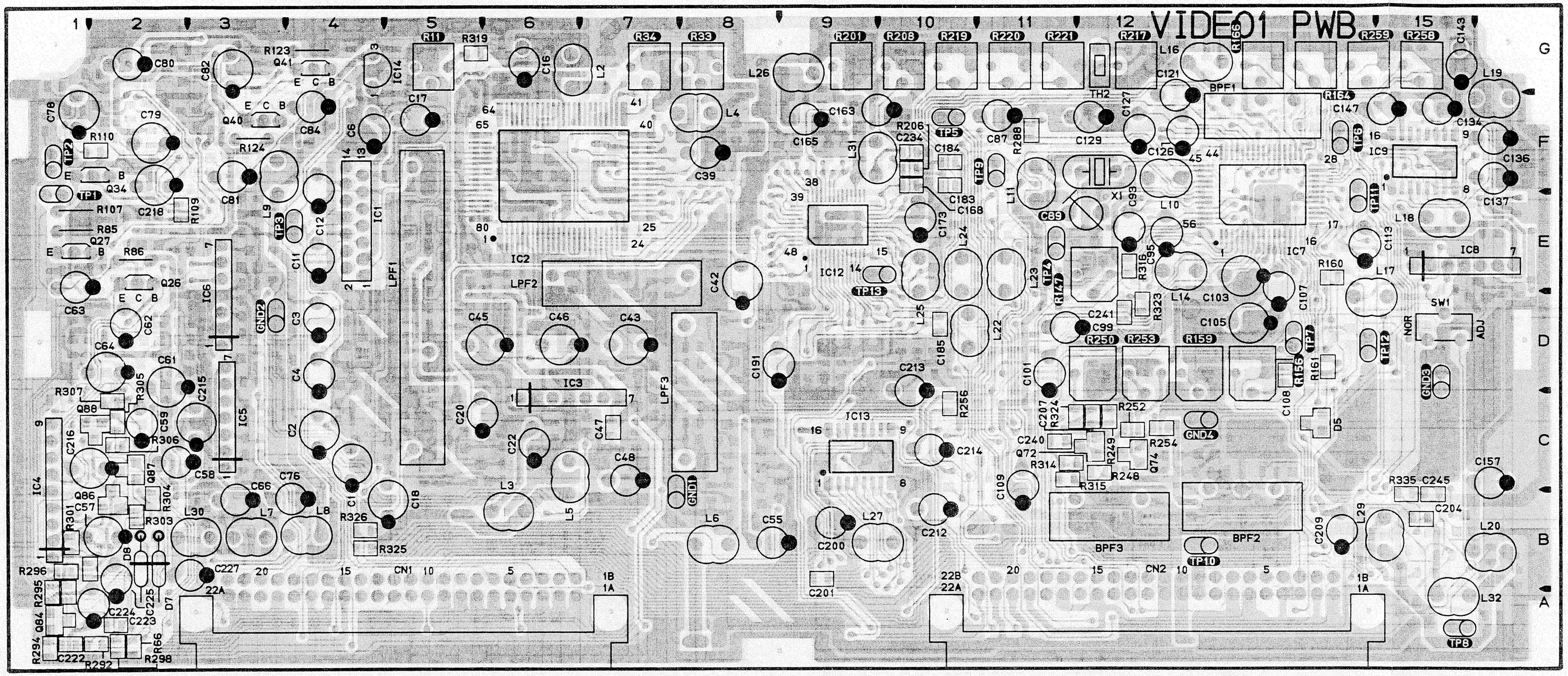
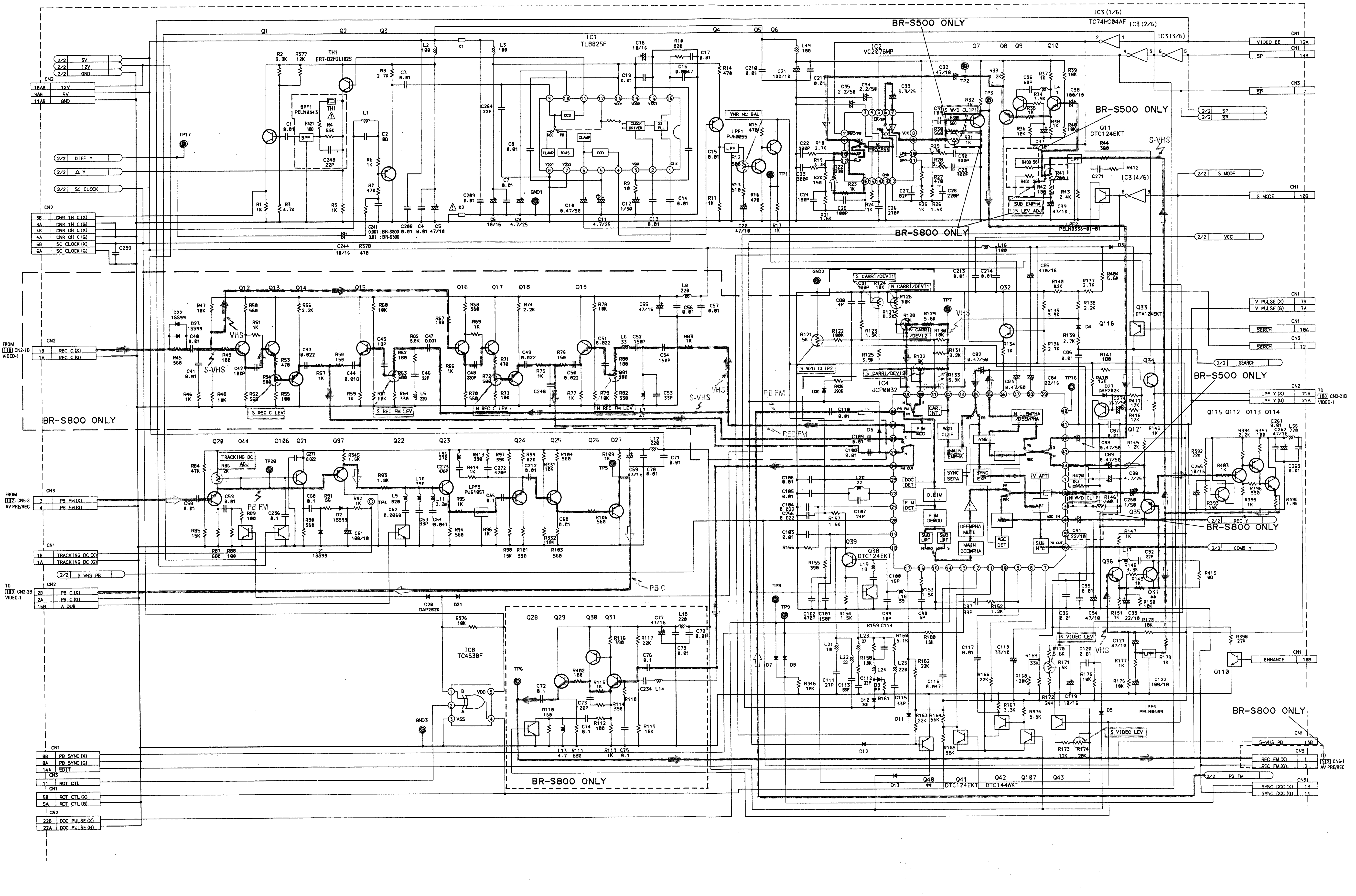
— PARTS Side —


VIDEO1 PWB
1
2
3
4
5
6
7
8
9
10
11
12
15
G
F
E
D
C
B
A
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC12
IC13
IC14
LPF1
LPF2
LPF3
BPF1
BPF2
BPF3
CN1
CN2
SW1
NOR
ADJ
X1
TH2

A B C D E F G H

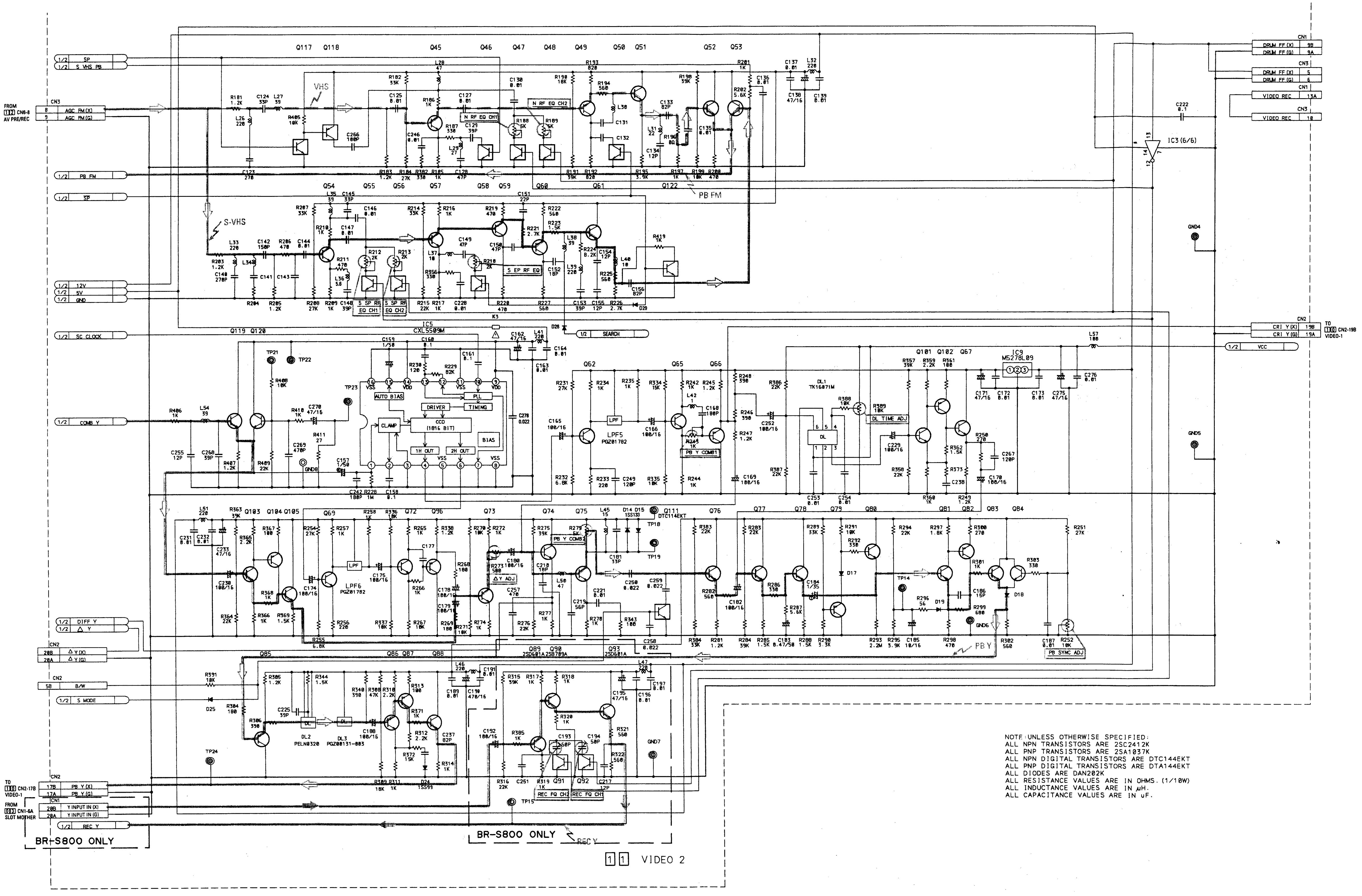
4.22 VIDEO-2 SCHEMATIC DIAGRAM

— DIAGRAM (1/2) —



IC1 TL8825F
IC2 VC2076MP
IC3 (1/6) TC74HC04AF
IC3 (2/6)
IC3 (3/6)
IC3 (4/6)
IC4 JCP0032
IC8 TC4S30F
BR-S500 ONLY
BR-S800 ONLY
TH1 ERT-D2FGL102S
BPF1 PELN0343
LPF1 PU60055
LPF3 PU61057
LPF4 PELN0409
Q11 DTC124EKT
Q33 DTA124EKT
Q38 DTC124EKT
Q41 DTC124EKT
Q42 DTC144WKT
TRACKING DC ADJ
S REC C LEV
S REC FM LEV
N REC C LEV
N REC FM LEV
S CARRI/DEVI1
N CARRI/DEVI1
N CARRI/DEVI2
S CARRI/DEVI2
S W/D CLIP1
S W/D CLIP2
SUB EMPHA IN LEV ADJ
N VIDEO LEV
S VIDEO LEV
YNR NC BAL
FROM CN2-1B VIDEO-1
FROM CN6-3 AV PRE/REC
TO CN2-2B VIDEO-1
TO CN2-21B VIDEO-1
TO CN6-1 AV PRE/REC
VIDEO EE
SP
S MODE
VCC
V PULSE (X)
V PULSE (G)
SEARCH
LPF Y (X)
LPF Y (G)
REC Y
COMB Y
ENHANCE
S-VHS PB
REC FM (X)
REC FM (G)
PB FM
SYNC DOC (X)
SYNC DOC (G)
DIFF Y
Δ Y
SC CLOCK
CNR 1H C (X)
CNR 1H C (G)
CNR OH C (X)
CNR OH C (G)
SC CLOCK (X)
SC CLOCK (G)
REC C (X)
REC C (G)
PB FM (X)
PB FM (G)
TRACKING DC (X)
TRACKING DC (G)
S VHS PB
PB C (X)
PB C (G)
A DUB
PB SYNC (X)
PB SYNC (G)
EDIT
ROT CTL
ROT CTL (X)
ROT CTL (G)
DOC PULSE (X)
DOC PULSE (G)
12V
5V
GND
VHS
S-VHS
PB FM
REC FM
PB C
1
2
3
4
5
6
A
B
C
E
F
G
H

— DIAGRAM (2/2) —


FROM
1 1/2 CN6-8
AV PRE/REC
CN3
AGC FM (X)
AGC FM (G)
1/2 SP
1/2 S VHS PB
1/2 PB FM
1/2 SP
1/2 12V
1/2 5V
1/2 GND
1/2 SC CLOCK
1/2 COMB Y
1/2 DIFF Y
1/2 Δ Y
CN2
20B Δ Y (X)
20A Δ Y (G)
CN2
5B B/W
1/2 S MODE
TO
1 1 CN2-17B
VIDEO-1
CN2
17B PB Y (X)
17A PB Y (G)
FROM
1 1 CN1-6A
SLOT MOTHER
CN1
20B Y INPUT IN (X)
20A Y INPUT IN (G)
1/2 REC Y
BR-S800 ONLY
BR-S800 ONLY
REC Y
1 1 VIDEO 2
VHS
S-VHS
PB FM
N RF EQ CH1
N RF EQ CH2
S SP RF EQ CH1
S SP RF EQ CH2
S EP RF EQ
K3
D28
1/2 SEARCH
IC5
CXL5509M
AUTO BIAS
DRIVER
TIMING
PLL
CLAMP
CCO
(1016 BIT)
1H OUT
2H OUT
BIAS
LPF5
PGZ01782
LPF6
PGZ01782
PB Y COMB1
PB Y COMB2
Δ Y ADJ
DL1
TK16071M
DL TIME ADJ
IC9
M5278L09
1/2 VCC
DL2
PELN0320
DL3
PGZ00131-003
REC FQ CH2
REC FQ CH1
PB SYNC ADJ
PB Y
IC3 (6/6)
GND4
GND5
GND6
GND7
TP14
TP15
TP18
TP19
TP21
TP22
TP23
TP24
CN1
DRUM FF (X) 9B
DRUM FF (G) 9A
CN3
DRUM FF (X) 5
DRUM FF (G) 6
CN1
VIDEO REC 13A
CN3
VIDEO REC 10
CN2
CRI Y (X) 19B
CRI Y (G) 19A
TO
1 1 CN2-19B
VIDEO-1
Q89 Q90
2SD601A 2SB709A
Q93
2SD601A
Q111
DTC114EKT

NOTE: UNLESS OTHERWISE SPECIFIED:
ALL NPN TRANSISTORS ARE 2SC2412K
ALL PNP TRANSISTORS ARE 2SA1037K
ALL NPN DIGITAL TRANSISTORS ARE DTC144EKT
ALL PNP DIGITAL TRANSISTORS ARE DTA144EKT
ALL DIODES ARE DAN202K
ALL RESISTANCE VALUES ARE IN OHMS. (1/10W)
ALL INDUCTANCE VALUES ARE IN µH.
ALL CAPACITANCE VALUES ARE IN uF.

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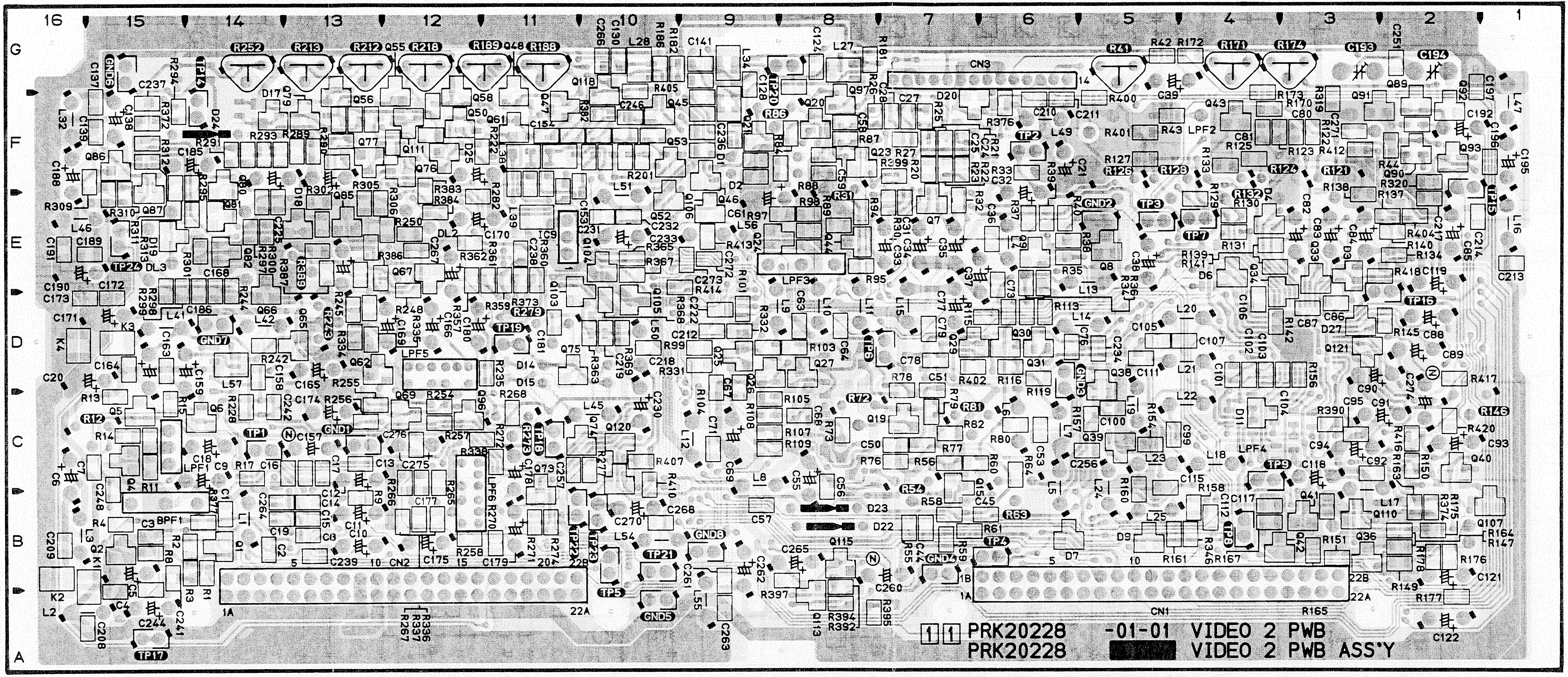
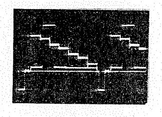
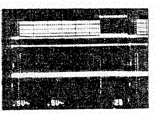
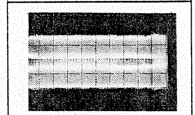
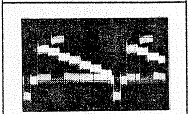
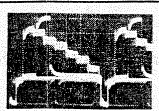
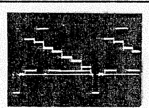
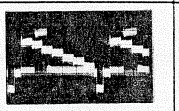
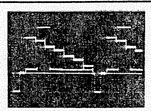
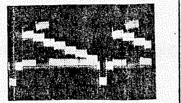
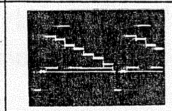
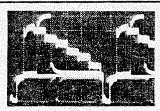
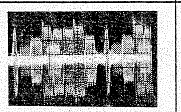
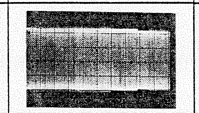
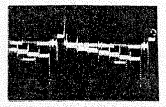
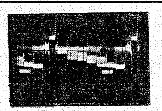
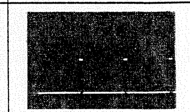
A B C E F G H

4.23 VIDEO-2 CIRCUIT BOARD
— SOLDER Side —


16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
G
F
E
D
C
B
A
CN1
CN2
CN3
TP1
TP2
TP3
TP5
TP6
TP7
TP9
TP15
TP16
TP17
TP19
TP20
TP21
TP22
TP23
TP24
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
PRK20228 -01-01 VIDEO 2 PWB
PRK20228 VIDEO 2 PWB ASS'Y

TP15

[REC] 0.5 Vp-p
TP16

UPPER : TP2 LOWER : TP16
TP20

[PB] 0.9 Vp-p
TP24

[PB] 2.1 Vp-p

— MAIN WAVE FORMS OF VIDEO-2 CIRCUIT —

TP1			TP2		TP3		TP5	TP6	TP7		TP9
											
[REC] 0.4 Vp-p — S-VHS —	[REC] 0.3 Vp-p — VHS —	[PB] 0.4 Vp-p	[REC] 0.4 Vp-p	[PB] 0.4 Vp-p	[REC] 0.6 Vp-p	[PB] 0.6 Vp-p	[PB] 150 mV (Burst level)	[REC] 760 mVp-p	[REC] 1.0 Vp-p — S-VHS —	[REC] 0.8 Vp-p — VHS —	[PB] 4.1 Vp-p (60 Hz)

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A B C E F G H

— DC Voltage (1/2) —

SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC1	1	2.6	2.6
	2	2.8	2.9
	3	11.1	11.2
	4	3.4	3.4
	5	1.7	1.7
	6	2.4	2.5
	7	0.0	0.0
	8	0.0	0.0
	9	2.6	2.6
	10	1.8	1.9
	11	3.4	3.4
	12	5.1	5.1
	13	5.2	5.2
	14	5.2	5.2
	15	0.0	0.0
	16	1.7	1.7
IC2	1	2.1	2.1
	2	0.0	5.2
	3	3.6	3.6
	4	3.6	3.6
	5	5.2	5.2
	6	2.4	2.3
	7	2.1	2.1
	8	5.2	5.2
	9	1.5	1.5
	10	3.1	3.0
	11	3.1	3.0
	12	3.1	3.0
	13	0.0	0.0
	14	3.0	3.0
	15	3.0	3.0
	16	0.0	2.1
	17	2.2	2.1
	18	2.2	2.1
IC3	1	5.1	0.0
	2	0.0	5.2
	3	0.0	0.0
	4	5.3	5.2
	5	5.3	5.3
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	5.2	5.2
	10	0.0	0.0
	11	4.1	4.1
	12	2.6	2.6
	13	2.4	2.4
	14	5.3	5.3
IC4	1	2.6	2.4
	2	2.5	2.1
	3	3.1	3.1
	4	2.3	2.3
	5	2.2	2.2
	6	2.3	2.6
	7	4.4	3.0
	8	5.0	0.0
	9	3.9	2.2
	10	0.0	0.0
	11	0.0	0.0
	12	3.2	3.2
	13	0.4	0.3
	14	0.0	0.0
	15	0.0	0.0
	16	0.0	2.4
	17	0.5	4.9
	18	5.0	3.7
	19	2.0	2.0
	20	4.1	4.1
	21	0.0	0.1
	22	3.4	3.2
	23	5.0	5.0
	24	2.6	1.6
	25	0.5	0.2
	26	3.3	1.5
	27	3.3	1.0
	28	3.8	3.7
	29	1.7	0.1
	30	2.6	0.1
	31	2.5	0.3
	32	2.5	0.2
	33	1.4	1.4
	34	3.2	3.2
	35	2.6	2.6
	36	5.0	5.0
	37	3.2	3.2
	38	2.8	2.7
	39	2.5	2.5
	40	2.8	2.7
	41	2.1	2.1
	42	3.3	3.4
	43	5.0	5.0
	44	3.3	3.4
IC5	1	1.8	2.1
	2	2.6	2.6
	3	0.0	0.0
	4	1.9	1.6
	5	0.0	0.0
	6	2.0	1.7
	7	0.0	0.0
	8	0.0	0.0
	9	5.1	2.6
	10	2.5	1.9
	11	0.0	3.4
	12	2.1	5.1
	13	2.1	5.2
	14	5.1	5.2
	15	0.8	0.0
	16	0.0	1.7
IC8	1	0.6	0.6
	2	0.0	2.5
	3	0.0	0.0
	4	0.0	2.6
	5	5.3	5.3
IC9	1	8.7	8.7
	2	0.0	0.0
	3	12.0	12.1
TRANSISTOR			
Q1	B	3.3	3.3
	C	5.2	5.2
	E	2.7	2.7
Q2	B	3.4	3.4
	C	5.2	5.2
	E	2.8	2.8
Q3	B	3.9	2.4
	C	0.0	0.0
	E	4.5	3.0
Q4	B	3.4	3.4
	C	2.3	2.3
	E	4.1	4.1
Q5	B	2.3	2.3
	C	3.4	3.3
	E	1.7	1.6
Q6	B	3.4	3.3
	C	5.0	5.0
	E	2.7	2.7
Q7	B	0.8	0.8
	C	0.0	0.0
	E	1.4	1.4
Q8	B	2.0	2.0
	C	0.0	0.0
	E	2.6	2.6
Q9	B	0.0	0.0
	C	0.0	0.5
	E	2.0	2.0
Q10	B	2.6	2.6
	C	3.3	3.3
	E	2.0	1.9
Q11	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q12	B	1.8	1.8
	C	4.1	4.1
	E	1.1	1.1
Q13	B	4.1	4.1
	C	5.2	5.2
	E	0.0	3.4
Q14	B	0.9	0.9
	C	0.0	0.0
	E	1.5	1.5
Q15	B	2.6	2.6
	C	5.2	5.2
	E	2.0	1.9
Q16	B	1.8	1.8
	C	4.1	4.1
	E	1.1	1.1
Q17	B	4.1	3.4
	C	5.2	5.2
	E	3.4	4.1
Q18	B	1.1	1.7
	C	0.0	0.0
	E	1.7	1.1
Q19	B	2.6	2.6
	C	5.2	5.2
	E	2.0	1.9
Q20	B	2.8	2.8
	C	9.3	9.3
	E	2.2	2.2
Q21	B	9.3	9.3
	C	11.8	11.8
	E	8.6	8.7
Q22	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q23	B	9.7	9.8
	C	11.8	11.8
	E	9.1	9.1
Q24	B	3.0	3.0
	C	6.7	6.7
	E	2.4	2.4
Q25	B	4.0	4.0
	C	8.5	8.5
	E	3.4	3.4
Q27	B	3.4	3.4
	C	0.0	0.0
	E	4.1	4.1
Q28	B	2.6	5.2
	C	3.3	0.0
	E	1.9	0.0
Q29	B	7.8	7.8
	C	12.0	12.0
	E	7.2	7.1
Q30	B	11.3	11.3
	C	8.0	7.8
	E	12.0	12.0
Q31	B	5.3	5.3
	C	11.3	11.4
	E	4.8	4.7
Q32	B	1.5	1.5
	C	0.0	0.0
	E	2.2	2.1
Q33	B	5.2	5.2
	C	0.0	0.2
	E	5.2	5.1
Q34	B	2.5	2.6
	C	5.0	5.0
	E	1.9	2.0
Q35	B	1.9	1.8
	C	0.0	0.0
	E	2.5	2.5
Q36	B	2.5	2.5
	C	3.2	3.2
	E	1.9	1.8
Q38	B	2.0	0.0
	C	0.0	0.0
	E	2.6	0.0
Q39	B	0.0	1.9
	C	5.0	3.7
	E	0.0	1.2
Q41	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.4
Q42	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q43	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q44	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q45	B	5.1	5.1
	C	7.4	7.4
	E	4.5	4.5
Q46	B	5.3	5.3
	C	0.0	0.0
	E	0.0	0.0
Q47	B	2.6	2.6
	C	0.0	0.0
	E	0.0	0.0
Q48	B	2.4	2.4
	C	0.0	0.0
	E	0.0	0.0
Q49	B	8.3	8.3
	C	2.9	2.9
	E	8.9	8.9
Q50	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q51	B	8.9	8.9
	C	11.9	11.9
	E	8.3	8.4
Q52	B	2.4	2.4
	C	11.9	11.9
	E	3.4	3.3
Q53	B	4.0	3.9
	C	11.9	11.9
	E	3.4	3.3
Q54	B	5.1	5.1
	C	7.4	7.5
	E	0.0	4.5
Q55	B	2.6	2.6
	C	0.0	0.0
	E	0.0	0.0
Q56	B	2.4	2.4
	C	0.0	0.0
	E	0.0	0.0
Q57	B	4.6	4.6
	C	8.0	8.0
	E	4.0	4.0
Q58	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q59	B	8.0	8.0
	C	3.3	3.3
	E	8.6	8.6
Q60	B	8.7	8.7
	C	2.6	2.6
	E	9.3	9.3

— DC Voltage (2/2) —

SYMBOL	No.	REC	PB
Q61	B	9.3	9.3
	C	11.9	11.9
	E	8.7	8.7
Q62	B	1.7	1.7
	C	6.4	6.4
	E	1.0	1.0
Q65	B	4.3	4.3
	C	5.1	5.1
	E	3.7	3.7
Q66	B	3.7	3.7
	C	0.0	0.0
	E	1.2	4.3
Q67	B	5.8	5.8
	C	8.7	8.7
	E	5.2	5.2
Q69	B	1.7	2.3
	C	8.2	8.2
	E	2.3	1.6
Q72	B	6.0	6.0
	C	11.4	11.4
	E	5.4	5.4
Q73	B	5.9	5.9
	C	6.7	6.7
	E	5.2	5.2
Q74	B	4.0	4.0
	C	11.9	11.9
	E	3.4	3.4
Q75	B	4.0	4.0
	C	11.9	11.9
	E	3.4	3.4
Q76	B	6.9	6.9
	C	11.8	11.8
	E	6.3	6.3
Q77	B	7.4	7.4
	C	11.8	11.8
	E	6.7	6.7
Q78	B	6.7	6.7
	C	11.8	11.8
	E	6.1	6.1
Q79	B	1.1	1.1
	C	0.0	0.0
	E	1.7	1.7
Q80	B	2.2	2.2
	C	11.8	11.8
	E	1.8	2.1
Q81	B	1.8	2.1
	C	10.7	10.6
	E	1.2	1.5
Q82	B	10.7	10.6
	C	2.5	3.1
	E	11.3	11.2
Q83	B	2.5	3.1
	C	11.8	11.8
	E	1.9	2.5
Q84	B	2.3	2.3
	C	7.4	11.8
	E	1.9	2.5
Q85	B	1.3	1.9
	C	0.0	0.0
	E	2.0	1.5
Q86	B	3.3	3.3
	C	11.0	11.0
	E	2.7	2.7
Q87	B	11.0	11.0
	C	7.8	7.8
	E	11.6	11.6
Q88	B	7.8	7.8
	C	11.8	11.8
	E	0.0	7.2
Q89	B	4.1	4.1
	C	8.6	8.6
	E	3.5	3.5
Q90	B	8.6	8.6
	C	2.8	2.8
	E	9.2	9.2
Q91	B	2.4	2.4
	C	0.3	0.0
	E	0.0	0.0
Q92	B	2.6	2.6
	C	0.3	0.0
	E	0.0	0.0
Q93	B	2.8	2.8
	C	12.0	12.0
	E	2.2	2.2
Q96	B	5.4	5.4
	C	0.0	0.0
	E	6.0	6.0
Q97	B	9.3	9.3
	C	0.0	0.0
	E	9.9	9.8
Q101	B	3.2	3.2
	C	7.9	7.9
	E	2.6	2.6
Q102	B	7.9	0.0
	C	5.8	5.8
	E	8.5	8.5
Q103	B	4.3	4.3
	C	10.9	10.9
	E	3.7	3.7
Q104	B	10.9	10.9
	C	6.9	6.9
	E	11.6	11.6
Q105	B	6.9	6.3
	C	11.9	11.9
	E	6.3	6.9
Q106	B	5.1	0.0
	C	0.0	0.0
	E	0.0	0.0
Q107	B	5.3	5.3
	C	0.0	0.0
	E	0.0	0.0
Q110	B	5.3	5.3
	C	0.0	0.0
	E	0.0	0.0
Q111	B	0.3	0.3
	C	0.0	0.0
	E	0.0	0.0
Q112	B	4.8	5.0
	C	11.0	11.0
	E	4.2	4.5
Q113	B	11.0	11.0
	C	5.4	5.7
	E	11.6	11.6
Q114	B	5.4	5.7
	C	12.0	12.0
	E	4.8	5.0
Q115	B	4.8	4.8
	C	12.0	12.0
	E	4.8	4.9
Q116	B	0.2	0.2
	C	2.5	2.5
	E	0.0	0.0
Q117	B	5.3	5.3
	C	0.1	0.0
	E	0.0	0.0
Q118	B	0.1	0.0
	C	11.9	11.9
	E	11.9	11.9
Q119	B	2.3	2.3
	C	5.1	5.1
	E	1.7	1.7
Q120	B	0.1	0.0
	C	5.1	5.1
	E	1.7	1.7
Q121	B	2.3	2.3
	C	0.0	0.0
	E	2.6	2.6
Q122	B	.	.
	C	.	.
	E	.	.
CONNECTOR			
CN1	1A	0.0	0.0
	1B	0.0	0.0
	2A	0.0	—
	2B	0.0	—
	3A	0.0	—
	3B	0.0	—
	4A	0.0	2.8
	4B	0.2	2.8
	5A	0.0	0.0
	5B	0.1	2.6
	6A	0.0	0.0
	6B	4.0	4.1
	7A	0.0	0.0
	7B	0.2	0.2
	8A	0.0	0.0
	8B	0.5	0.5
	9A	0.0	0.0
	9B	2.4	2.4
	10A	5.2	5.2
	10B	5.2	5.2
	11A	0.0	0.0
	11B	0.0	0.0
	12A	5.1	5.1
	12B	5.2	5.2
	13A	5.1	0.0
	13B	4.1	4.1
	14A	5.3	1.9
	14B	5.3	5.3
	15A	1.5	1.9
	15B	1.3	2.2
	16A	1.4	1.9
	16B	1.4	1.9
	17A	0.0	1.9
	17B	0.6	1.9
	18A	5.3	5.3
	18B	5.3	5.3
	19A	0.0	1.6
	19B	—	1.9
	20A	0.0	0.0
	20B	6.9	6.9
	21A	—	1.9
	21B	—	2.0
	22A	0.0	1.9
	22B	0.0	2.0
CN2	1A	0.0	0.0
	1B	2.9	2.9
	2A	0.0	0.0
	2B	4.8	4.1
	3A	0.0	0.0
	3B	2.7	2.7
	4A	0.0	0.0
	4B	3.9	3.9
	5A	1.2	2.9
	5B	0.4	0.4
	6A	0.0	0.0
	6B	1.4	1.4
	7A	0.0	0.0
	7B	1.5	0.3
	8A	1.3	1.3
	8B	1.2	1.5
	9A	5.3	5.3
	9B	5.3	5.3
	10A	12.1	12.1
	10B	12.1	12.1
	11A	0.0	0.0
	11B	0.0	0.0
	12A	5.2	5.2
	12B	5.2	5.2
	13A	12.9	12.9
	13B	12.9	12.9
	14A	0.0	0.0
	14B	0.0	0.0
	15A	0.0	0.0
	15B	1.8	1.7
	16A	1.0	1.3
	16B	0.0	0.0
	17A	0.0	0.0
	17B	7.2	7.2
	18A	—	1.2
	18B	—	1.1
	19A	0.0	0.0
	19B	4.3	4.3
	20A	0.0	0.0
	20B	2.8	2.8
	21A	0.0	0.0
	21B	1.9	2.0
	22A	0.0	0.0
	22B	0.0	0.0
CN3	1	0.0	0.0
	2	0.0	0.0
	3	—	1.3
	4	0.0	0.0
	5	2.4	2.4
	6	0.0	0.0
	7	0.0	0.0
	8	3.2	1.9
	9	0.0	0.0
	10	5.1	0.0
	11	—	2.5
	12	5.2	5.2
	13	0.8	0.8
	14	0.0	0.0

6

5

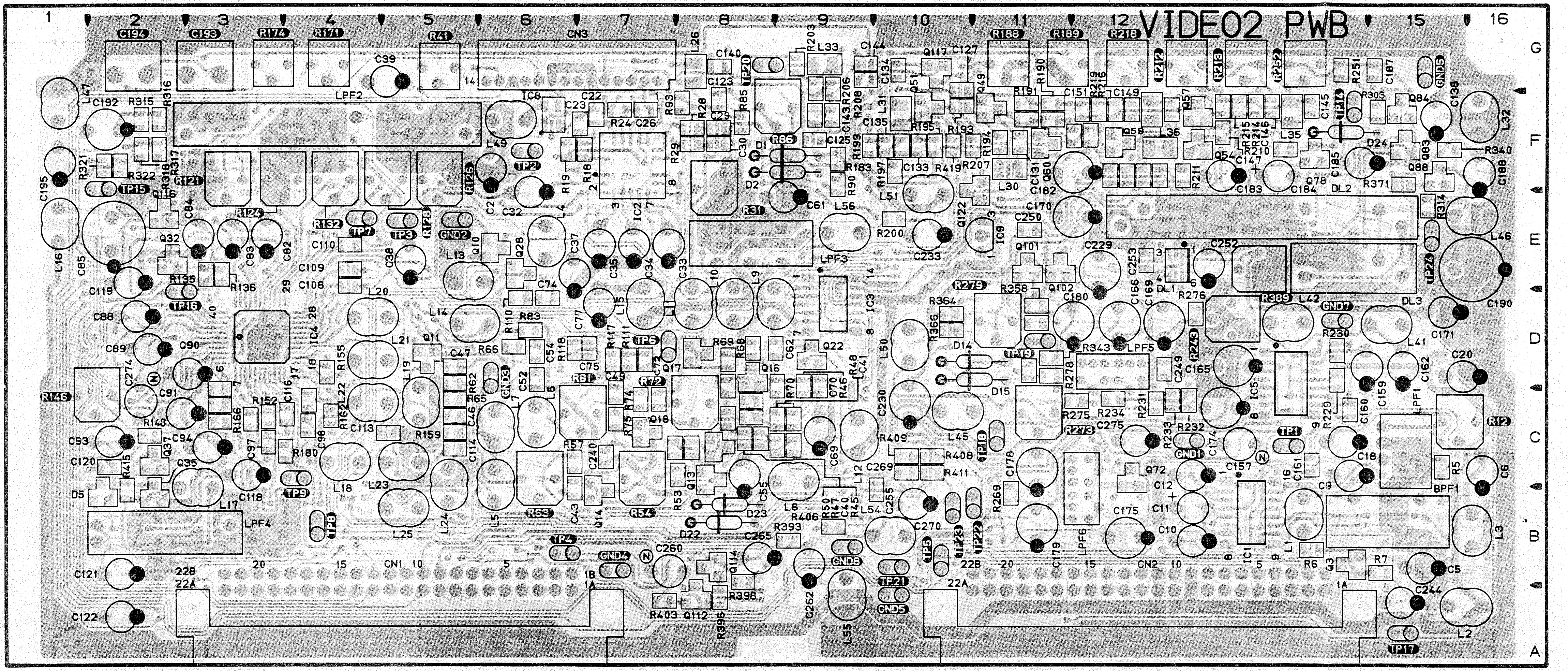
4

3

2

1

— PARTS Side —


VIDEO2 PWB
1
2
3
4
5
6
7
8
9
10
11
12
15
16
G
F
E
D
C
B
A
CN1
CN2
CN3
IC1
IC2
IC3
IC4
IC8
IC9
LPF1
LPF2
LPF3
LPF4
LPF5
LPF6
BPF1
DL1
DL2
DL3
22A
22B
1A
1B

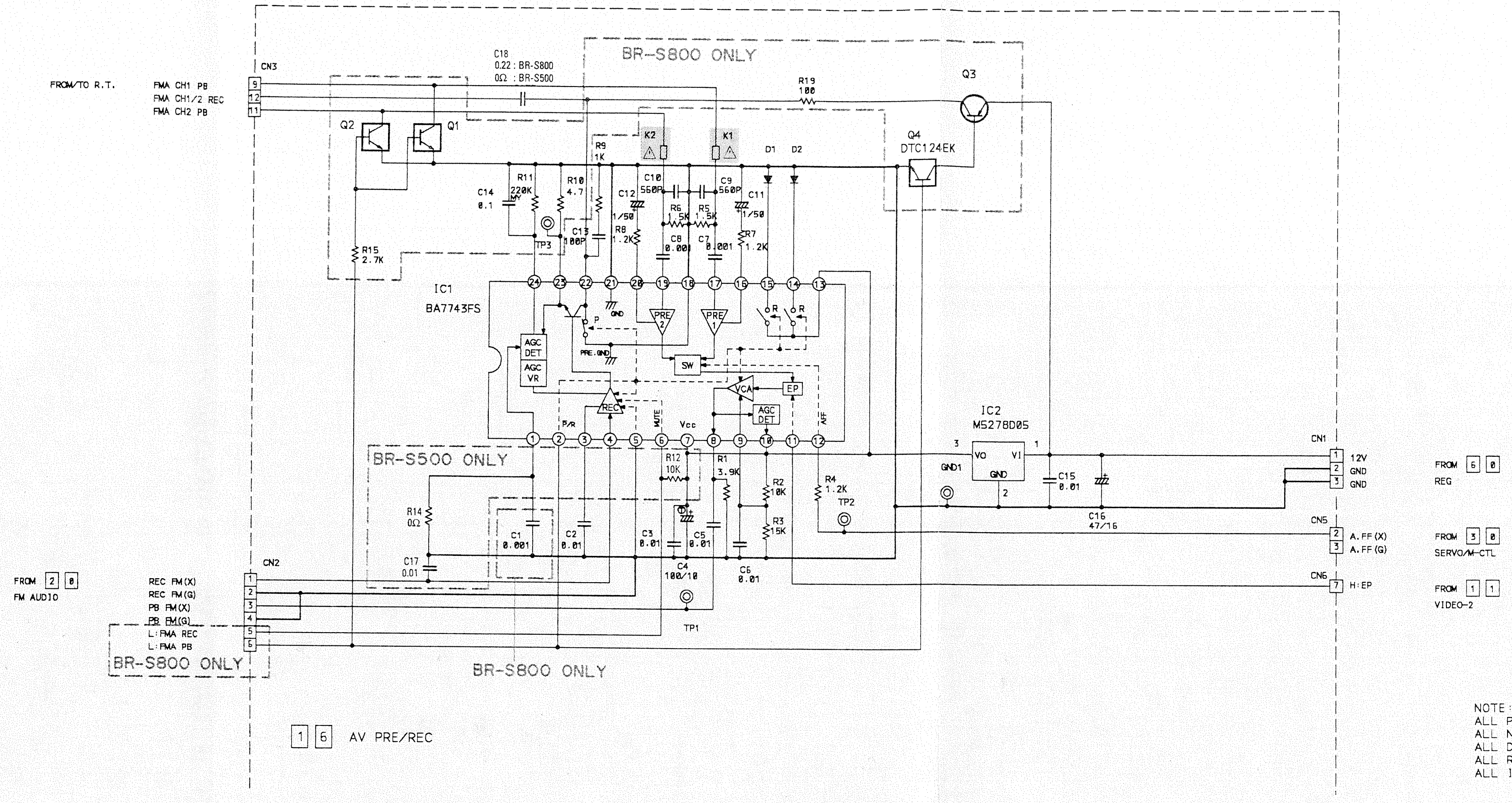
A B C E F G H

6

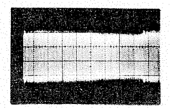
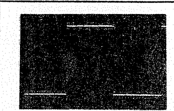
4.24 AV PRE/REC SCHEMATIC DIAGRAM AND CIRCUIT BOARD

— DIAGRAM (1/2) —

5


FROM/TO R.T.
FMA CH1 PB
FMA CH1/2 REC
FMA CH2 PB
CN3
C18
0.22 : BR-S800
0Ω : BR-S500
BR-S800 ONLY
R19 100
Q3
Q2
Q1
R9 1K
K2
K1
D1 D2
Q4 DTC124EK
C14 0.1
R11 220K
R10 4.7
C12 1/50
C10 560P
C9 560P
C11 1/50
R6 5K
R5 1.5K
TP3
C13 100P
R8 1.2K
C8 0.001
C7 0.001
R7 1.2K
R15 2.7K
IC1 BA7743FS
AGC DET
AGC VR
PRE 2
PRE 1
SW
VCA
EP
AGC DET
REC
GND
PRE.GND
P/R
MUTE
Vcc
A/F
IC2 M5278D05
VO VI
GND
GND1
C15 0.01
C16 47/16
CN1
12V
GND
GND
FROM 6 0 REG
CN5
A.FF(X)
A.FF(G)
FROM 3 0 SERVO/M-CTL
CN6
H:EP
FROM 1 1 VIDEO-2
BR-S500 ONLY
R12 10K
R1 3.9K
R2 10K
R4 1.2K
TP2
R3 15K
R14 0Ω
C1 0.001
C2 0.01
C3 0.01
C5 0.01
C4 100/10
C6 0.01
C17 0.01
TP1
CN2
FROM 2 0 FM AUDIO
REC FM(X)
REC FM(G)
PB FM(X)
PB FM(G)
L:FMA REC
L:FMA PB
BR-S800 ONLY
BR-S800 ONLY
1 6 AV PRE/REC

— MAIN WAVEFORMS OF AV PRE/REC CIRCUIT —

TP101	TP102
 [PB] 150 mVp-p	 4.5 Vp-p (30 Hz)

4

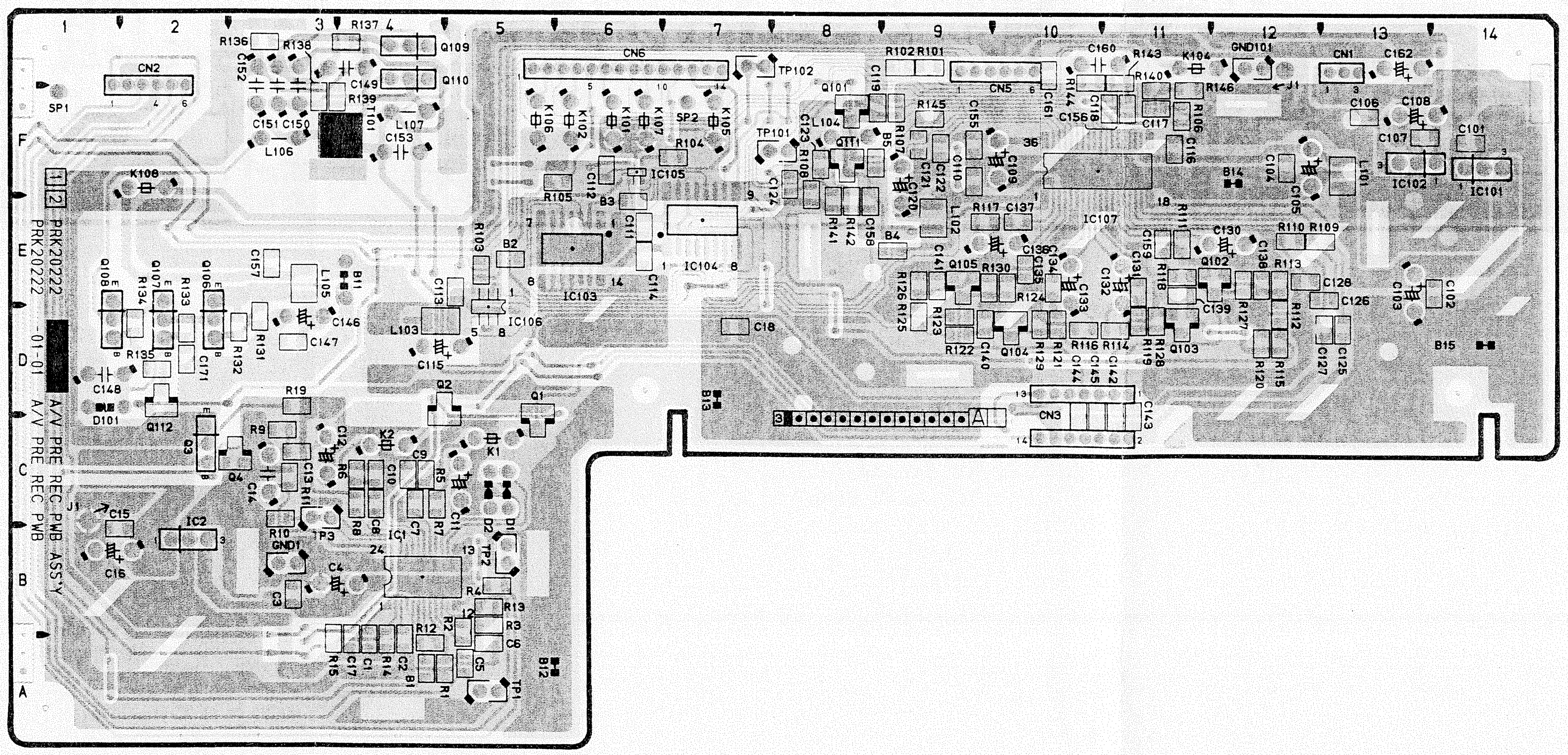
NOTE:UNLESS OTHERWISE SPECIFIED:
ALL PNP TRANSISTORS ARE 2SB973AR
ALL NPN DIGITAL TRANSISTORS ARE DTC323TK
ALL DIODES ARE 1SS136
ALL RESISTANCE VALUES ARE IN OHMS. (#/#W)
ALL INDUCTANCE VALUES ARE IN μH.

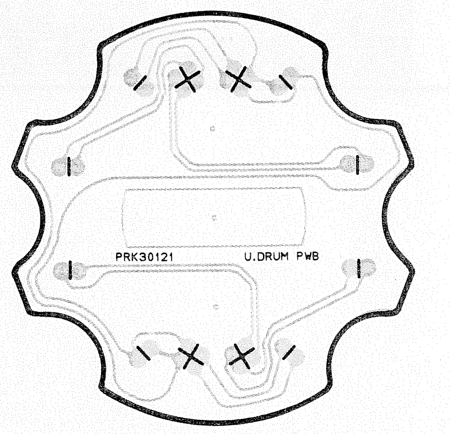
3

— CIRCUIT BOARD —

— SOLDER Side —

2

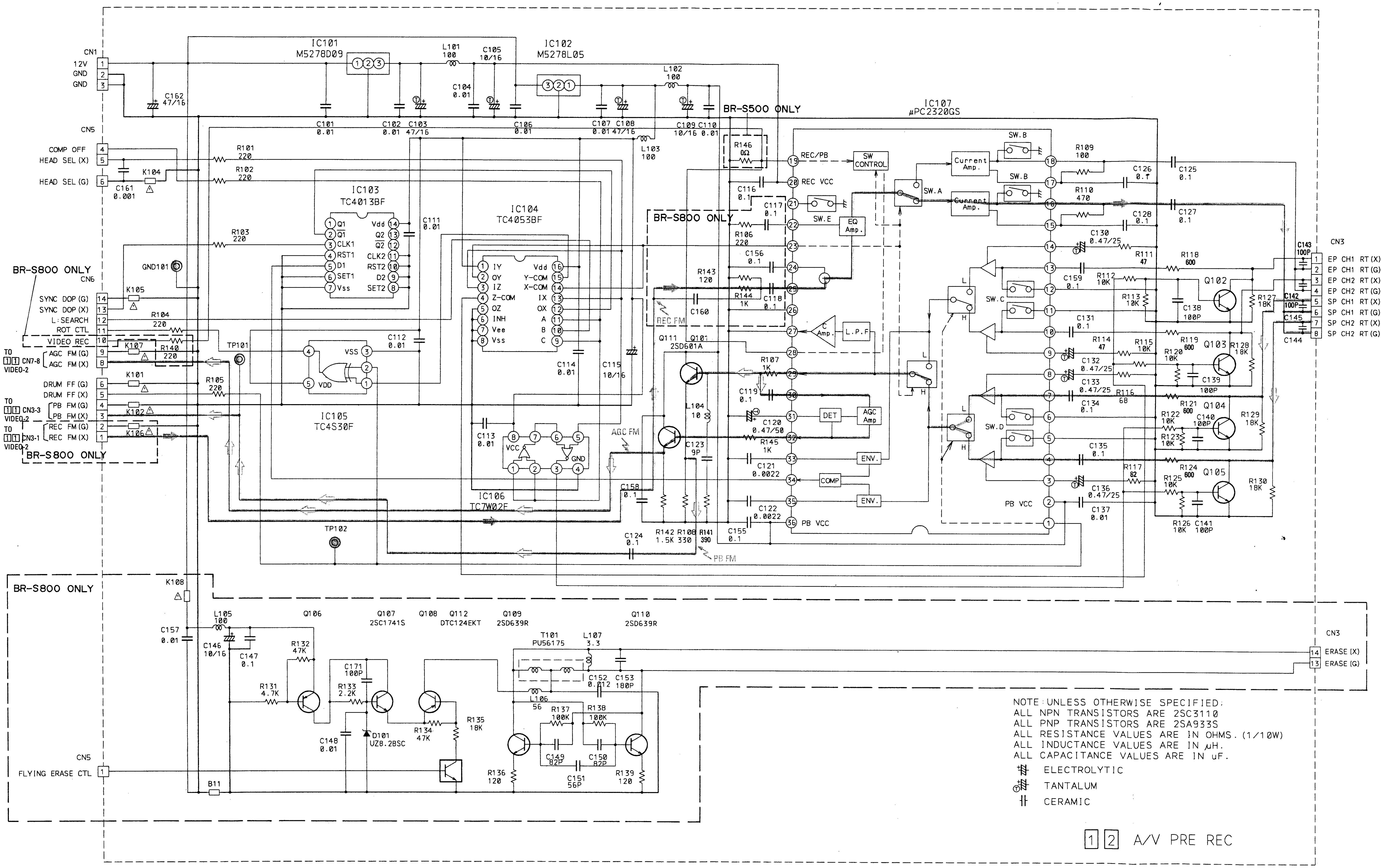

1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F
PRK20222
PRK20222 -01-01
A/V PRE REC PWB ASS'Y
A/V PRE REC PWB
CN1
CN2
CN3
CN5
CN6
IC1
IC2
IC101
IC102
IC103
IC104
IC105
IC106
IC107
TP101
TP102
TP1
TP2
TP3
GND101
GND1
SP1
SP2
J1
Q1
Q2
Q3
Q4
K1
K2


PRK30121
U.DRUM PWB

1

A B C 4-34 4-34 E F G H

— DIAGRAM (2/2) —



CN1
12V
GND
GND
C162 47/16
IC101 M5278D09
L101 100
C105 10/16
C104 0.01
IC102 M5278L05
L102 100
C101 0.01
C102 0.01
C103 47/16
C106 0.01
C107 0.01
C108 47/16
C109 10/16
C110 0.01
BR-S500 ONLY
IC107 μPC2320GS
CN5
COMP OFF
HEAD SEL (X)
HEAD SEL (G)
C161 0.001
K104
R101 220
R102 220
L103 100
R146 0Ω
REC/PB
SW CONTROL
REC VCC
Current Amp.
SW.A
SW.B
R109 100
R110 470
C125 0.1
C126 0.1
C127 0.1
C128 0.1
IC103 TC4013BF
Q1
Q̄1
CLK1
RST1
D1
SET1
Vss
Vdd
Q2
Q̄2
CLK2
RST2
D2
SET2
C111 0.01
IC104 TC4053BF
IY
OY
IZ
Z-COM
OZ
INH
Vee
Vss
Vdd
Y-COM
X-COM
IX
OX
A
B
C
BR-S800 ONLY
C116 0.1
C117 0.1
SW.E
EQ Amp.
R106 220
C156 0.1
R143 120
R144 1K
C118 0.1
C160
REC FM
C Amp.
L.P.F
R103 220
GND101
CN6
K105
SYNC DOP (G)
SYNC DOP (X)
L.SEARCH
ROT CTL
VIDEO REC
AGC FM (G)
AGC FM (X)
TO 1 1 CN7-8 VIDEO-2
R104 220
K107
R140 220
TP101
C112 0.01
VSS
VDD
C114 0.01
C115 10/16
Q111
Q101 2SD601A
R107 1K
C119 0.1
C120 0.47/50
R145 1K
DET
AGC Amp
L104 10
C123 9P
ENV.
COMP
C121 0.0022
C122 0.0022
PB VCC
R142 1.5K
R108 330
R141 390
C155 0.1
C124 0.1
PB FM
AGC FM
DRUM FF (G)
DRUM FF (X)
PB FM (G)
PB FM (X)
REC FM (G)
REC FM (X)
TO 1 1 CN3-3 VIDEO-2
TO 1 1 CN3-1 VIDEO-2
K101
K102
K106
R105 220
IC105 TC4S30F
C113 0.01
VCC
GND
IC106 TC7W02F
C158 0.1
TP102
SW.C
SW.D
C159 0.1
R112 10K
R111 47
C130 0.47/25
R118 600
Q102
C138 100P
R113 10K
R127 18K
C131 0.1
R114 47
R115 10K
C132 0.47/25
R119 600
R120 10K
Q103
R128 18K
C139 100P
C133 0.47/25
R116 68
C134 0.1
R121 600
Q104
R122 10K
C140 100P
R123 10K
R129 18K
C135 0.1
R117 82
R124 600
R125 10K
Q105
R130 18K
C136 0.47/25
C137 0.01
R126 10K
C141 100P
PB VCC
CN3
C143 100P
C142 100P
C145
C144
EP CH1 RT (X)
EP CH1 RT (G)
EP CH2 RT (X)
EP CH2 RT (G)
SP CH1 RT (X)
SP CH1 RT (G)
SP CH2 RT (X)
SP CH2 RT (G)
BR-S800 ONLY
K108
L105 100
C157 0.01
C146 10/16
C147 0.1
Q106
Q107 2SC1741S
Q108
Q112 DTC124EKT
Q109 2SD639R
Q110 2SD639R
R132 47K
R131 4.7K
C171 100P
R133 2.2K
C148 0.01
D101 UZ8.2BSC
R134 47K
R135 18K
T101 PU56175
L107 3.3
C152 0.012
C153 180P
L106 56
R137 100K
R138 100K
C149 82P
C150 82P
C151 56P
R136 120
R139 120
ERASE (X)
ERASE (G)
CN5
FLYING ERASE CTL
B11
A
B
C
E
F
G
H
1
2
3
4
5
6

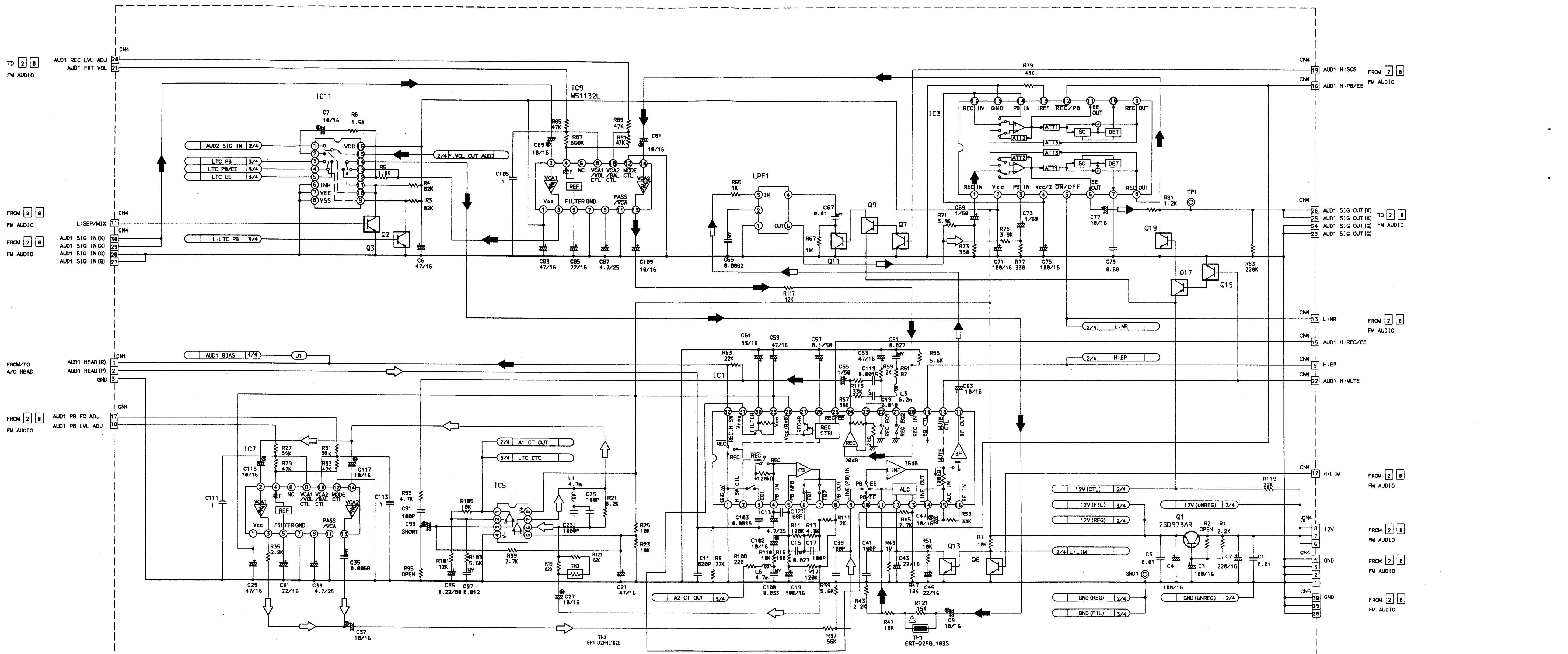
NOTE: UNLESS OTHERWISE SPECIFIED.
ALL NPN TRANSISTORS ARE 2SC3110
ALL PNP TRANSISTORS ARE 2SA933S
ALL RESISTANCE VALUES ARE IN OHMS. (1/10W)
ALL INDUCTANCE VALUES ARE IN μH.
ALL CAPACITANCE VALUES ARE IN uF.

- ELECTROLYTIC
- TANTALUM
- CERAMIC

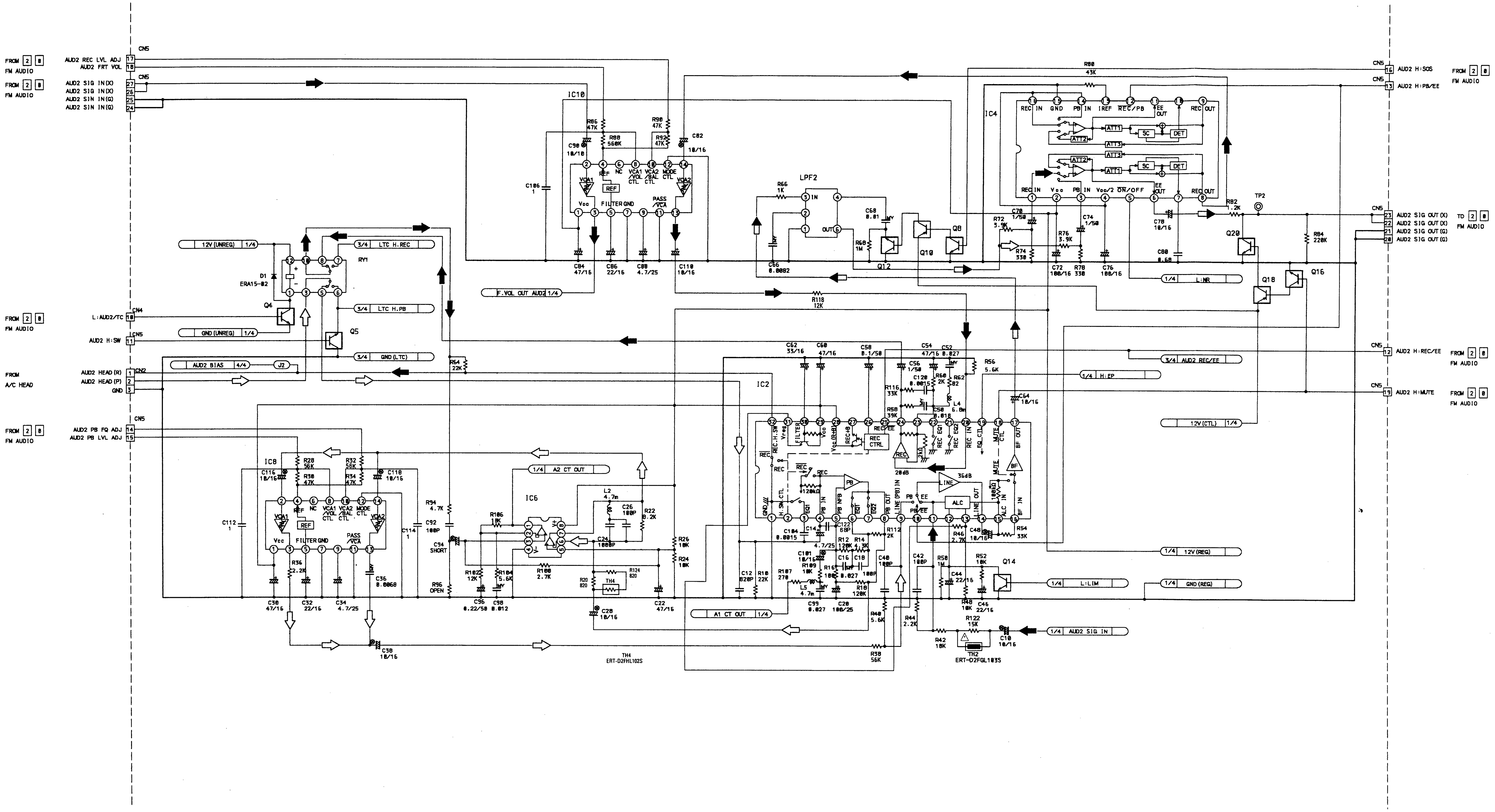
1 2 A/V PRE REC

4.25 NORMAL AUDIO SCHEMATIC DIAGRAM (BR-S800)

— DIAGRAM (1/4) —


TO 2 8 FM AUDIO
AUD1 REC LVL ADJ
AUD1 FRT VOL
CN4
FROM 2 8 FM AUDIO
L:SEP/MIX
AUD1 SIG IN(X)
AUD1 SIG IN(G)
FROM/TO A/C HEAD
AUD1 HEAD (R)
AUD1 HEAD (P)
GND
CN1
AUD1 PB FQ ADJ
AUD1 PB LVL ADJ
IC11
IC9 M51132L
IC3
LPF1
IC1
IC7
IC5
AUD2 SIG IN 2/4
LTC PB 3/4
LTC PB/EE 3/4
LTC EE 3/4
L:LTC PB 3/4
2/4 F.VOL OUT AUD2
AUD1 BIAS 4/4
J1
2/4 A1 CT OUT
3/4 LTC CTC
A2 CT OUT 3/4
2/4 L:NR
2/4 H:EP
2/4 L:LIM
12V (CTL) 2/4
12V (FIL) 3/4
12V (REG) 2/4
12V (UNREG) 2/4
GND (REG) 2/4
GND (FIL) 3/4
GND (UNREG) 2/4
Q1 2SD973AR
Q2
Q3
Q6
Q7
Q9
Q11
Q13
Q15
Q17
Q19
TP1
GND1
TH1 ERT-D2FGL103S
TH3 ERT-D2FHL102S
AUD1 H:SOS
AUD1 H:PB/EE
FROM 2 8 FM AUDIO
AUD1 SIG OUT (X)
AUD1 SIG OUT (G)
TO 2 8 FM AUDIO
L:NR
AUD1 H:REC/EE
H:EP
AUD1 H:MUTE
H:LIM
12V
GND
CN5

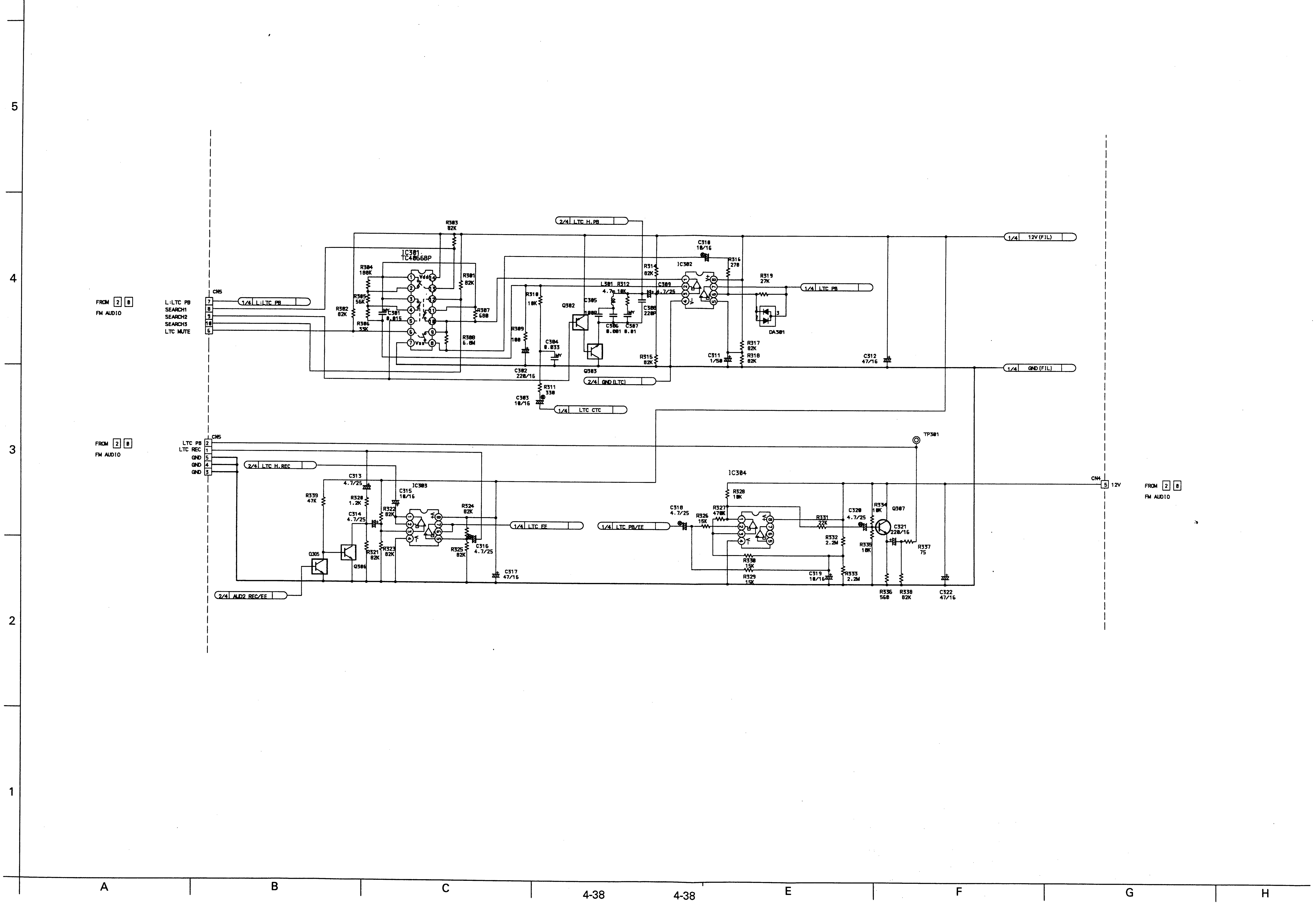
— DIAGRAM (2/4) —


FROM 2 8 FM AUDIO
AUD2 REC LVL ADJ
AUD2 FRT VOL
AUD2 SIG IN(X)
AUD2 SIN IN(G)
CN5
CN4
CN2
L:AUD2/TC
AUD2 H:SW
FROM A/C HEAD
AUD2 HEAD (R)
AUD2 HEAD (P)
GND
AUD2 PB FQ ADJ
AUD2 PB LVL ADJ
12V (UNREG) 1/4
GND (UNREG) 1/4
AUD2 BIAS 4/4
J2
3/4 LTC H.REC
3/4 LTC H.PB
3/4 GND (LTC)
F.VOL OUT AUD2 1/4
1/4 A2 CT OUT
A1 CT OUT 1/4
D1 ERA15-02
RY1
Q4
Q5
IC10
IC8
IC6
IC2
IC4
LPF2
VCA1
VCA2
REF
Vcc
FILTER GND
PASS /VCA
MODE CTL
VCA1 /VOL /BAL CTL
NC
REC IN
GND
PB IN
IREF
REC/PB
EE OUT
REC OUT
Vcc/2
ON/OFF
ATT1
ATT2
ATT3
SC
DET
Q8
Q10
Q12
Q14
Q16
Q18
Q20
TP2
REC CTRL
LINE
ALC
BF
PB
REC
EE
20dB
36dB
1/4 L:NR
1/4 H:EP
1/4 12V (REG)
1/4 GND (REG)
1/4 L:LIM
1/4 12V (CTL)
3/4 AUD2 REC/EE
1/4 AUD2 SIG IN
TH2 ERT-D2FGL103S
TH4 ERT-D2FHL102S
AUD2 H:SOS
AUD2 H:PB/EE
AUD2 SIG OUT(X)
AUD2 SIG OUT(G)
AUD2 H:REC/EE
AUD2 H:MUTE
TO 2 8 FM AUDIO

6
5
4
3
2
1

A B C E F G H

— DIAGRAM (3/4) —


6
5
4
3
2
1
A
B
C
E
F
G
H
FROM 2 8
FM AUDIO
L:LTC PB
SEARCH1
SEARCH2
SEARCH3
LTC MUTE
CN5
7
8
9
10
6
1/4 L:LTC PB
R303 82K
IC301
TC4066BP
R304 100K
R305 56K
R306 33K
R302 82K
C301 0.015
MY
Vdd
Vss
R301 82K
R307 680
R308 6.8M
2/4 LTC H.PB
R310 10K
R309 100
C302 220/16
C304 0.033
MY
R311 330
C303 10/16
1/4 LTC CTC
Q302
Q303
C305 100P
L301 4.7m
R312 10K
C306 0.001
C307 0.01
MY
C308 220P
2/4 GND (LTC)
R314 82K
R315 82K
C309 4.7/25
IC302
C310 10/16
R316 270
R319 27K
1/4 LTC PB
DA301
R317 82K
R318 82K
C311 1/50
C312 47/16
1/4 12V (FIL)
1/4 GND (FIL)
FROM 2 8
FM AUDIO
CN5
LTC PB 2
LTC REC 1
GND 5
GND 4
GND 3
2/4 LTC H.REC
TP301
C313 4.7/25
R339 47K
R320 1.2K
C315 10/16
IC303
C314 4.7/25
R322 82K
R321 82K
R323 82K
Q305
Q306
R324 82K
R325 82K
C316 4.7/25
C317 47/16
1/4 LTC EE
2/4 AUD2 REC/EE
1/4 LTC PB/EE
C318 4.7/25
IC304
R328 10K
R327 470K
R326 15K
R330 15K
R329 15K
R331 22K
R332 2.2M
R333 2.2M
C319 10/16
C320 4.7/25
R334 10K
R335 10K
Q307
C321 220/16
R337 75
R336 560
R338 82K
C322 47/16
CN4
5 12V
FROM 2 8
FM AUDIO

— DIAGRAM (4/4) —

6

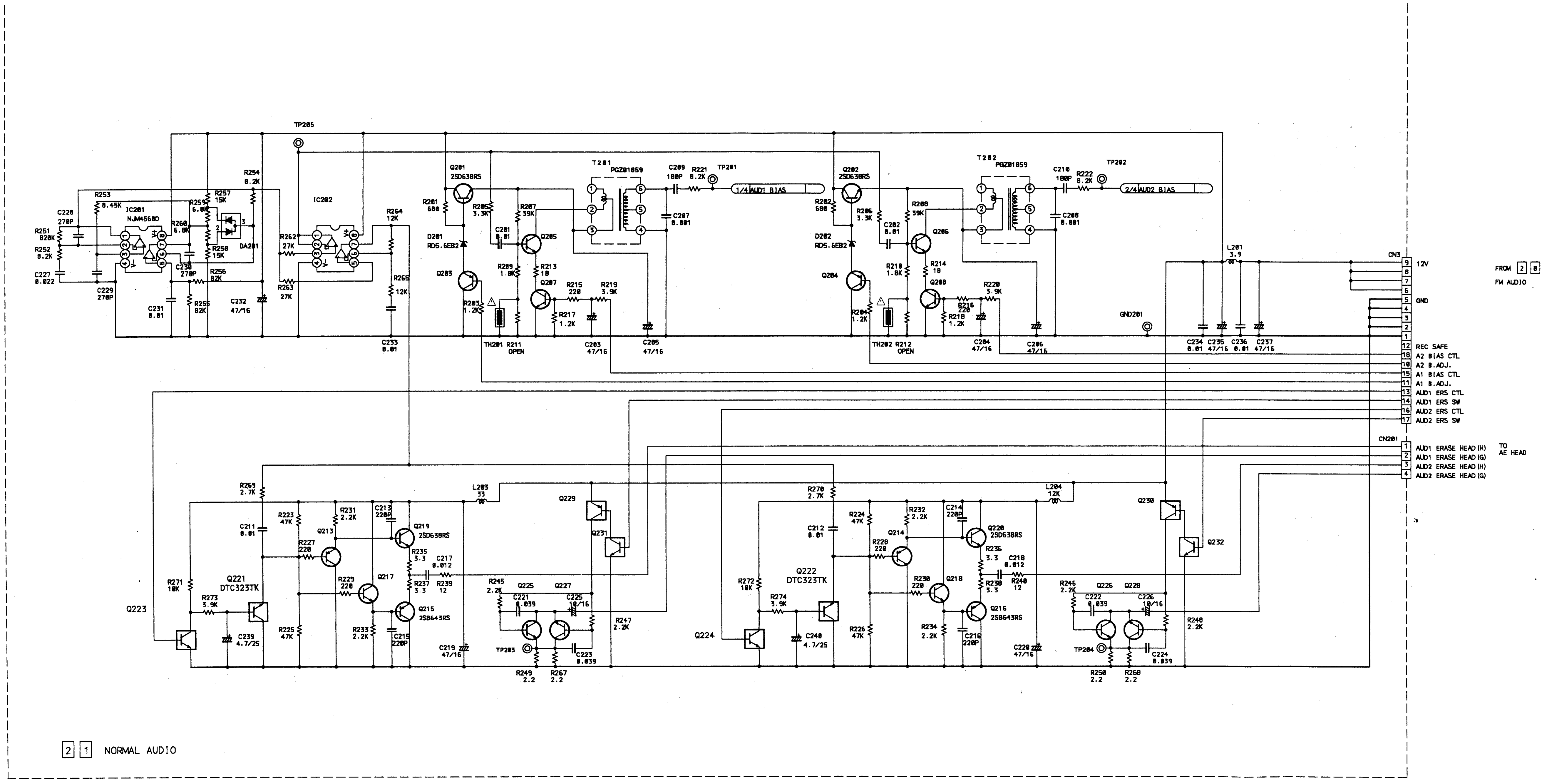
5

4

3

2

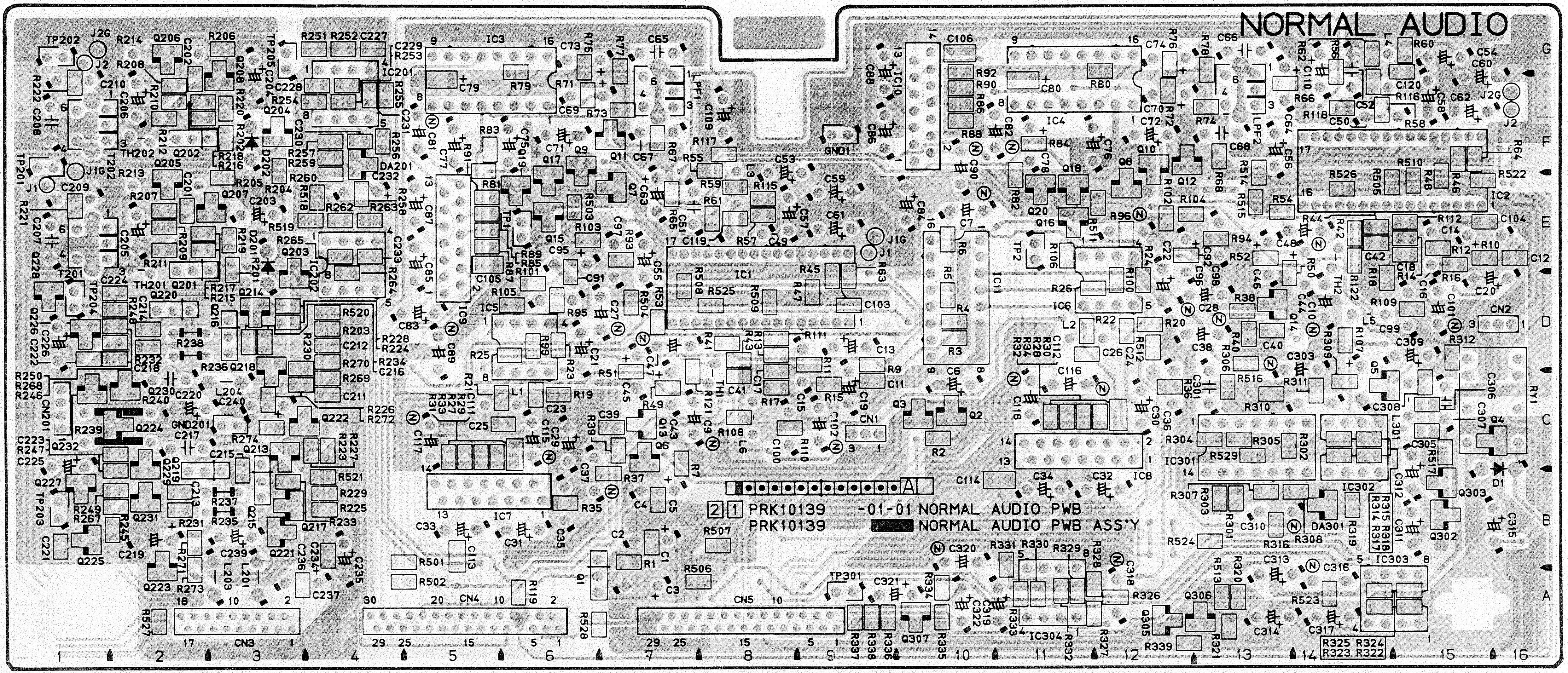
1


TP205
IC201
NJM4560D
IC202
R251
820K
R252
8.2K
C227
0.022
C228
270P
C229
270P
R253
8.45K
R254
8.2K
R257
15K
R259
6.8K
R260
6.8K
R258
15K
DA201
C230
270P
R256
82K
R255
82K
C231
0.01
C232
47/16
R262
27K
R263
27K
R264
12K
R265
12K
C233
0.01
Q201
2SD638RS
R201
680
D201
RD5.6EB2
Q203
R203
1.2K
TH201
R211
OPEN
R205
3.3K
C201
0.01
R207
39K
Q205
R209
1.8K
R213
10
Q207
R215
220
R217
1.2K
R219
3.9K
C203
47/16
C205
47/16
T201
PGZ01059
C209
100P
R221
8.2K
TP201
C207
0.001
1/4 AUD1 BIAS
Q202
2SD638RS
R202
680
D202
RD5.6EB2
Q204
R204
1.2K
TH202
R212
OPEN
R206
3.3K
C202
0.01
R208
39K
Q206
R210
1.8K
R214
10
Q208
R216
220
R218
1.2K
R220
3.9K
C204
47/16
C206
47/16
T202
PGZ01059
C210
100P
R222
8.2K
TP202
C208
0.001
2/4 AUD2 BIAS
GND201
L201
3.9
C234
0.01
C235
47/16
C236
0.01
C237
47/16
CN3
9 12V
8
7
6
5 GND
4
3
2
1
12 REC SAFE
18 A2 BIAS CTL
10 A2 B.ADJ.
15 A1 BIAS CTL
11 A1 B.ADJ.
13 AUD1 ERS CTL
14 AUD1 ERS SW
16 AUD2 ERS CTL
17 AUD2 ERS SW
FROM 2 0
FM AUDIO
CN201
1 AUD1 ERASE HEAD (H)
2 AUD1 ERASE HEAD (G)
3 AUD2 ERASE HEAD (H)
4 AUD2 ERASE HEAD (G)
TO
AE HEAD
R269
2.7K
C211
0.01
R271
10K
Q221
DTC323TK
R273
3.9K
C239
4.7/25
Q223
R223
47K
R225
47K
R227
220
Q213
R231
2.2K
R229
220
Q217
R233
2.2K
C213
220P
Q219
2SD638RS
R235
3.3
C217
0.012
R237
3.3
R239
12
Q215
2SB643RS
C215
220P
C219
47/16
L203
33
Q229
Q231
R245
2.2K
Q225
Q227
C221
0.039
C225
10/16
R247
2.2K
TP203
C223
0.039
R249
2.2
R267
2.2
R270
2.7K
C212
0.01
R272
10K
Q222
DTC323TK
R274
3.9K
C240
4.7/25
Q224
R224
47K
R226
47K
R228
220
Q214
R232
2.2K
R230
220
Q218
R234
2.2K
C214
220P
Q220
2SD638RS
R236
3.3
C218
0.012
R238
3.3
R240
12
Q216
2SB643RS
C216
220P
C220
47/16
L204
12K
Q230
Q232
R246
2.2K
Q226
Q228
C222
0.039
C226
10/16
R248
2.2K
TP204
C224
0.039
R250
2.2
R268
2.2
2 1 NORMAL AUDIO

A B C E F G H

4.26 NORMAL AUDIO CIRCUIT BOARD (BR-S800)

— SOLDER Side —


NORMAL AUDIO
PRK10139 -01-01 NORMAL AUDIO PWB
PRK10139 NORMAL AUDIO PWB ASS'Y
CN1
CN2
CN3
CN4
CN5
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
IC10
IC201
IC202
IC301
IC302
IC303
IC304
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

— DC Voltage (1/2) —

SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC1	1	0.0	0.0
	2	9.4	9.4
	3	0.0	0.1
	4	2.1	2.0
	5	2.1	2.0
	6	2.1	2.0
	7	2.1	2.0
	8	2.1	2.0
	9	0.0	0.0
	10	0.0	5.2
	11	0.0	0.0
	12	0.0	0.0
	13	7.8	7.8
	14	4.9	5.4
	15	4.8	—
	16	4.8	—
	17	4.9	—
	18	0.0	0.0
	19	0.0	0.0
	20	0.0	0.0
	21	0.0	0.0
	22	0.0	0.0
	23	0.5	0.5
	24	4.8	—
	25	5.2	5.2
	26	10.1	10.2
	27	9.1	9.1
	28	10.3	10.3
	29	10.3	10.3
	30	10.2	10.2
	31	9.5	9.5
	32	0.0	0.0
IC2	1	0.0	0.0
	2	9.4	6.7
	3	0.0	1.7
	4	2.1	2.0
	5	2.1	2.1
	6	2.1	2.1
	7	2.1	2.1
	8	2.1	2.1
	9	0.0	0.0
	10	0.0	0.0
	11	0.0	0.0
	12	0.0	0.0
	13	7.8	7.7
	14	4.8	4.8
	15	4.9	4.8
	16	4.8	4.8
	17	4.9	4.9
	18	0.0	0.0
	19	0.0	0.0
	20	0.0	0.0
	21	0.0	0.0
	22	0.0	0.0
	23	0.5	0.5
	24	4.8	4.8
	25	5.2	0.0
	26	10.2	0.0
	27	9.0	0.0
	28	10.3	10.3
	29	10.3	10.3
	30	10.1	10.1
	31	9.5	9.4
	32	0.0	0.0
IC3	1	5.2	5.3
	2	10.3	10.3
	3	5.2	5.2
	4	5.3	5.3
	5	0.0	2.1
	6	5.4	—
	7	0.6	0.5
	8	5.3	—
	9	5.3	5.3
	10	0.6	0.4
	11	5.3	5.3
	12	0.0	5.2
	13	1.3	1.2
	14	5.3	5.3
	15	0.0	0.0
	16	5.3	5.3
IC4	1	5.2	5.3
	2	10.3	10.3
	3	5.2	5.3
	4	5.3	5.3
	5	0.0	2.1
	6	5.4	5.4
	7	0.4	0.4
	8	5.3	5.3
	9	5.3	5.3
	10	0.6	0.4
	11	5.3	5.3
	12	0.0	0.0
	13	1.2	1.2
	14	5.3	5.3
	15	0.0	0.0
	16	5.3	5.3
IC5	1	5.2	5.2
	2	5.2	5.2
	3	5.1	5.2
	4	0.0	0.0
	5	5.1	5.2
	6	5.2	5.2
	7	5.2	—
	8	10.3	10.3
IC6	1	5.2	5.2
	2	5.2	5.2
	3	5.2	5.2
	4	0.0	0.0
	5	5.2	5.2
	6	5.2	5.2
	7	5.2	5.2
	8	10.3	10.3
IC7	1	10.3	10.3
	2	4.3	—
	3	4.1	—
	4	5.6	5.6
	5	10.0	10.2
	6	1.8	3.0
	7	0.0	0.0
	8	3.2	5.3
	9	0.0	0.0
	10	3.4	5.3
	11	0.0	0.0
	12	0.0	0.0
	13	4.1	—
	14	4.5	—
IC8	1	10.3	10.3
	2	4.6	4.5
	3	4.1	4.1
	4	5.6	5.6
	5	10.1	10.2
	6	3.6	0.0
	7	0.0	0.0
	8	3.4	5.3
	9	0.1	0.0
	10	4.5	5.3
	11	0.0	0.0
	12	0.0	0.0
	13	4.1	4.1
	14	4.6	4.6
IC9	1	10.3	10.3
	2	4.6	4.5
	3	4.1	4.1
	4	5.5	5.5
	5	10.2	10.2
	6	0.0	0.0
	7	0.0	0.0
	8	2.3	5.1
	9	0.0	0.0
	10	3.9	5.3
	11	2.0	0.0
	12	0.0	0.0
	13	4.1	—
	14	4.6	—
IC10	1	10.3	10.3
	2	4.6	4.5
	3	4.1	4.1
	4	5.5	5.5
	5	10.2	10.2
	6	0.0	0.0
	7	0.0	0.0
	8	2.4	5.1
	9	0.0	0.0
	10	3.9	5.3
	11	0.0	0.0
	12	0.0	0.0
	13	4.1	4.1
	14	4.6	4.6
IC11	1	4.1	4.1
	2	4.1	3.9
	3	5.2	5.2
	4	5.2	5.1
	5	5.1	5.1
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	10.2	0.0
	10	10.2	10.3
	11	10.2	10.3
	12	4.1	4.1
	13	4.1	4.1
	14	4.1	4.1
	15	4.1	4.1
	16	10.3	10.3
IC201	1	6.0	6.0
	2	5.3	5.6
	3	6.0	6.1
	4	0.0	0.0
	5	5.9	6.0
	6	6.1	6.0
	7	6.0	6.0
	8	12.0	12.0
IC202	1	6.0	6.0
	2	6.0	6.0
	3	6.0	6.0
	4	0.0	0.0
	5	6.0	6.0
	6	6.4	6.4
	7	6.3	6.3
	8	12.0	12.0
IC301	1	5.2	5.2
	2	5.2	5.2
	3	5.2	5.2
	4	5.2	5.2
	5	5.2	10.2
	6	0.1	10.1
	7	0.0	0.0
	8	5.1	5.2
	9	5.2	5.2
	10	5.2	5.2
	11	5.2	5.2
	12	10.1	10.1
	13	10.1	10.2
	14	10.3	10.3
IC302	1	5.2	5.2
	2	5.2	5.2
	3	5.1	5.2
	4	0.0	0.0
	5	5.1	5.2
	6	5.2	5.2
	7	5.2	5.2
	8	10.3	10.3
IC303	1	5.2	5.2
	2	5.2	5.2
	3	5.1	5.2
	4	0.0	0.0
	5	2.1	5.1
	6	5.1	5.1
	7	5.1	5.1
	8	10.3	10.3
IC304	1	0.1	0.1
	2	—	—
	3	—	—
	4	0.0	0.0
	5	—	—
	6	—	0.3
	7	0.0	0.0
	8	12.0	12.1
TRANSISTOR			
Q1	B	11.0	11.0
	C	12.0	12.1
	E	10.3	10.3
Q2	B	0.1	7.3
	C	10.2	0.0
	E	0.0	0.0
Q3	B	0.0	0.0
	C	10.2	10.3
	E	0.0	0.0
Q4	B	0.0	0.0
	C	12.0	12.1
	E	0.0	0.0
Q5	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q6	B	5.2	0.0
	C	0.0	1.6
	E	0.0	0.0
Q7	B	0.0	5.2
	C	12.0	0.0
	E	0.0	0.0
Q8	B	0.0	5.2
	C	12.0	0.0
	E	0.0	0.0
Q9	B	12.0	0.0
	C	0.0	1.1
	E	12.0	1.2
Q10	B	12.0	0.0
	C	0.0	1.1
	E	12.0	1.2
Q11	B	0.0	1.1
	C	0.0	0.0
	E	0.0	0.0
Q12	B	0.0	1.1
	C	0.0	0.0
	E	0.0	0.0
Q13	B	0.0	1.6
	C	0.0	0.0
	E	0.0	0.0
Q14	B	0.0	1.6
	C	0.0	0.0
	E	0.0	0.0
Q15	B	0.0	0.0
	C	11.6	1.2
	E	0.0	0.0
Q16	B	0.0	0.0
	C	12.0	1.2
	E	0.0	0.0
Q17	B	12.0	1.2
	C	0.0	—
	E	12.0	1.2
Q18	B	12.0	1.2
	C	0.0	0.0
	E	12.0	1.2
Q19	B	0.0	—
	C	0.0	—
	E	0.0	0.0
Q20	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q201	B	10.7	11.2
	C	12.0	12.0
	E	10.0	10.6
Q202	B	11.2	11.3
	C	12.0	12.0
	E	10.6	10.7
Q203	B	4.5	5.1
	C	0.0	0.0
	E	5.1	5.8
Q204	B	5.1	5.1
	C	0.0	0.0
	E	5.7	5.8
Q205	B	0.7	0.7
	C	10.7	10.7
	E	1.9	1.7

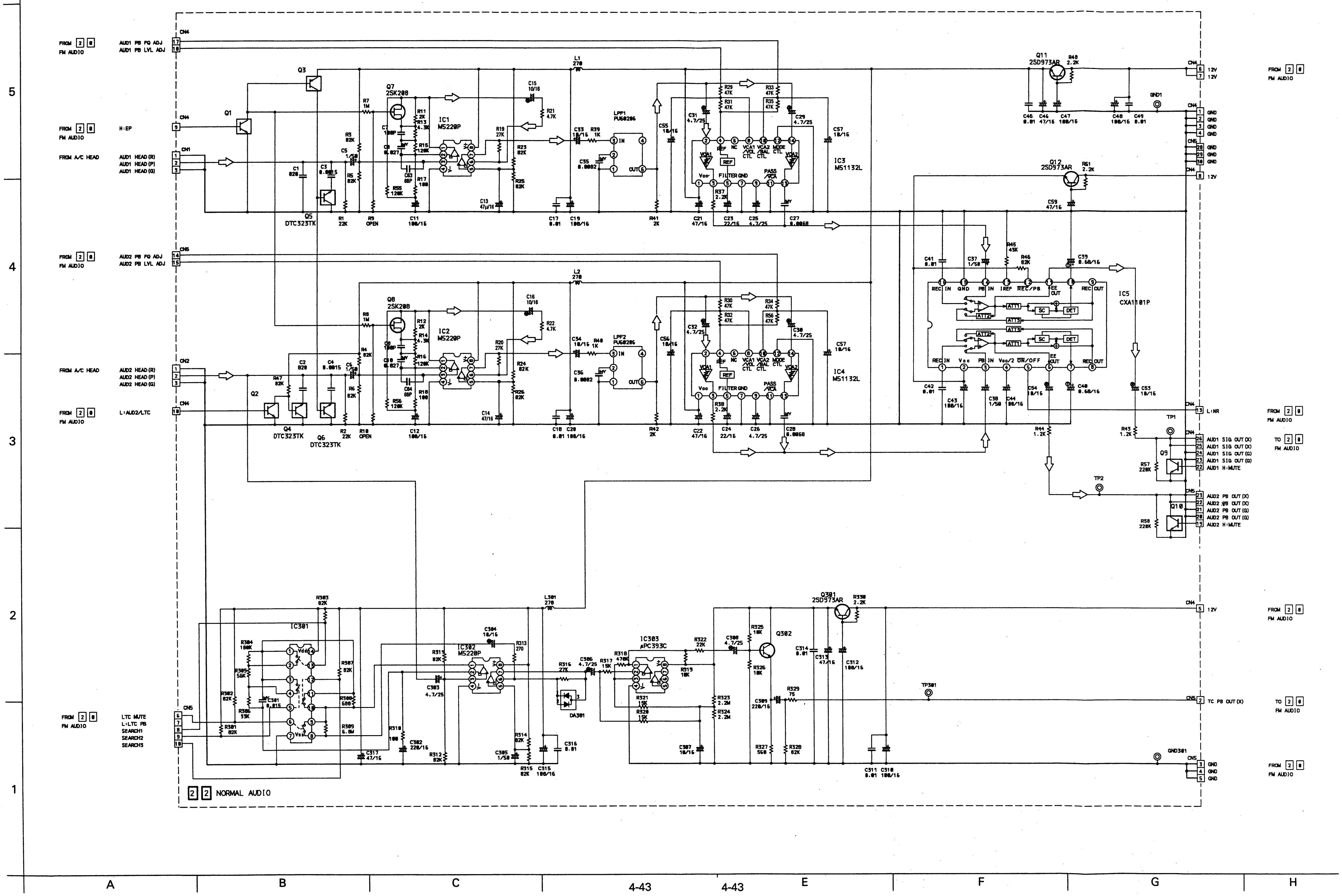
— DC Voltage (2/2) —

SYMBOL	No.	REC	PB
Q206	B	0.7	0.7
	C	10.7	10.7
	E	1.7	1.7
Q207	B	0.0	0.0
	C	1.7	1.7
	E	0.0	0.0
Q208	B	0.0	0.0
	C	1.7	1.7
	E	0.0	0.0
Q213	B	0.0	0.0
	C	0.0	0.0
	E	0.7	0.7
Q214	B	0.0	0.0
	C	0.0	0.0
	E	0.7	0.7
Q215	B	0.0	0.0
	C	0.0	0.0
	E	0.4	0.4
Q216	B	0.0	0.0
	C	0.0	0.0
	E	0.4	0.4
Q217	B	0.0	0.0
	C	12.0	12.0
	E	0.0	0.0
Q218	B	0.0	0.0
	C	12.0	12.0
	E	0.0	0.0
Q219	B	0.7	0.7
	C	12.0	12.0
	E	0.4	0.4
Q220	B	0.7	0.7
	C	12.0	12.0
	E	0.4	0.4
Q221	B	2.2	2.2
	C	0.0	0.0
	E	0.0	0.0
Q222	B	2.2	2.2
	C	0.0	0.0
	E	0.0	0.0
Q223	B	0.0	0.0
	C	4.9	5.0
	E	0.0	0.0
Q224	B	0.0	0.0
	C	4.9	4.9
	E	0.0	0.0
Q225	B	0.8	0.8
	C	0.0	0.0
	E	0.0	0.0
Q226	B	0.8	0.8
	C	0.0	0.0
	E	0.0	0.0
Q227	B	0.8	0.8
	C	0.0	0.0
	E	0.0	0.0
Q228	B	0.8	0.8
	C	0.0	0.0
	E	0.0	0.0
Q229	B	0.0	0.0
	C	12.0	12.0
	E	12.0	12.0
Q230	B	0.0	0.0
	C	12.0	12.0
	E	12.0	12.0
Q231	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0

SYMBOL	No.	REC	PB
Q232	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q302	B	10.3	10.3
	C	0.0	0.0
	E	10.3	10.3
Q303	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q305	B	0.0	0.0
	C	1.1	1.1
	E	0.0	0.0
Q306	B	1.1	1.1
	C	0.0	0.0
	E	0.0	0.0
Q307	B	5.8	5.8
	C	12.0	12.1
	E	5.1	5.1
CONNECTOR			
CN1	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
CN2	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
CN3	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	0.0	0.0
	6	12.0	12.1
	7	12.0	12.1
	8	12.0	12.1
	9	12.0	12.1
	10	5.1	5.1
	11	4.5	4.5
	12	—	0.9
	13	5.2	0.0
	14	5.2	0.0
	15	5.1	0.0
	16	5.2	0.0
	17	5.2	0.0
	18	5.1	0.0
CN4	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	12.0	12.1
	6	12.0	12.1
	7	12.0	12.1
	8	12.0	12.1
	9	0.0	0.0
	10	—	0.0
	11	0.0	0.0
	12	5.2	5.2
	13	0.0	0.0
	14	5.2	0.0
	15	5.2	0.0
	16	0.0	5.2
	17	1.2	1.3
	18	0.9	0.9
	19	0.0	0.0
	20	2.3	2.3
	21	2.0	2.1
	22	0.0	0.7
	23	0.0	0.0
	24	0.0	0.0
	25	—	0.1
	26	—	0.2
	27	0.8	0.0
	28	0.8	0.0
	29	5.7	5.7
	30	5.7	5.7

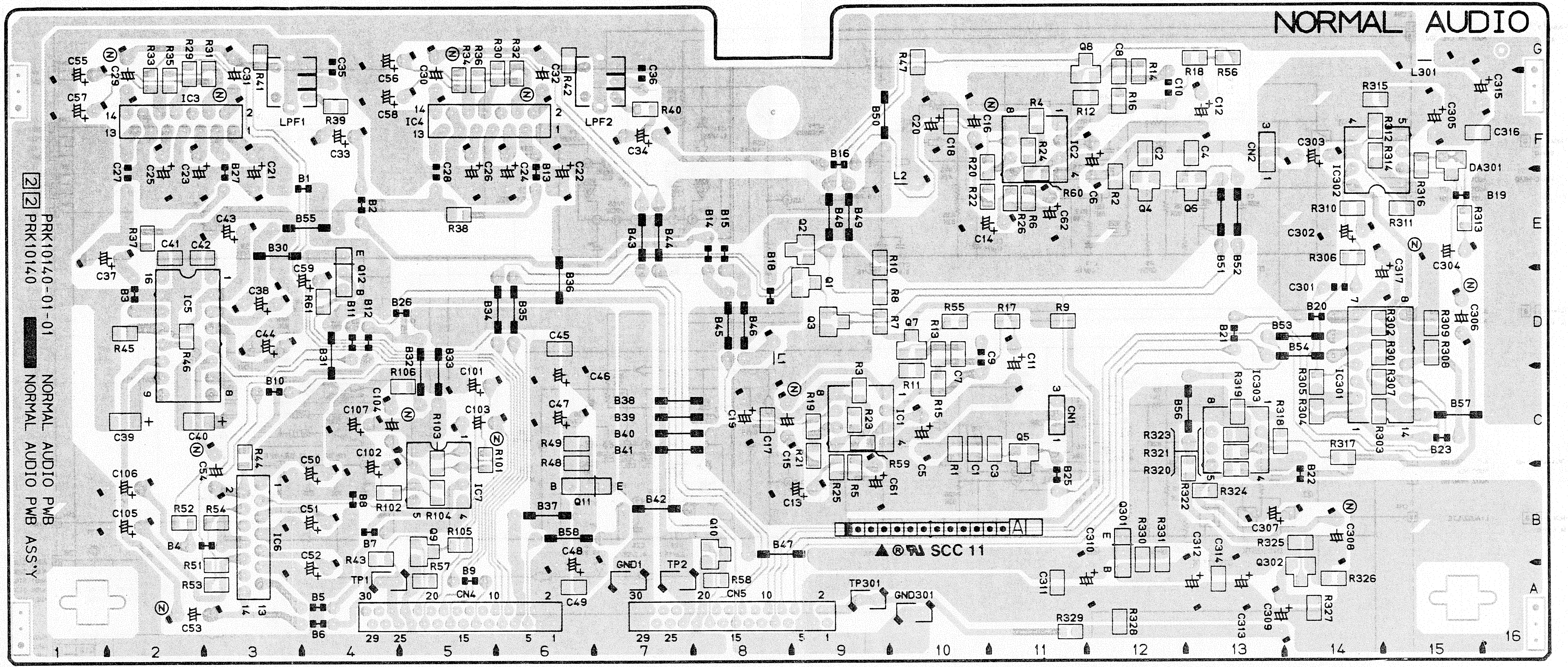
SYMBOL	No.	REC	PB
CN5	1	2.7	—
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	0.0	0.0
	6	0.0	0.0
	7	0.1	0.1
	8	10.2	9.2
	9	0.1	0.1
	10	10.2	9.1
	11	5.2	0.0
	12	5.2	0.0
	13	0.0	5.2
	14	3.5	3.2
	15	1.2	1.2
	16	0.0	0.0
	17	2.3	2.3
	18	2.2	2.2
	19	0.0	0.0
	20	0.0	0.0
	21	0.0	0.0
	22	0.0	0.1
	23	0.0	0.0
	24	0.0	0.0
	25	0.0	0.0
	26	5.7	5.7
	27	5.7	5.7
	28	0.0	0.0
	29	0.0	0.0
	30	0.0	0.0

4.27 NORMAL AUDIO SCHEMATIC DIAGRAM (BR-S500)


6
5
4
3
2
1
A
B
C
D
E
F
G
H
FROM 2 8 FM AUDIO
AUD1 PB FQ ADJ
AUD1 PB LVL ADJ
H:EP
FROM A/C HEAD
AUD1 HEAD (R)
AUD1 HEAD (P)
AUD1 HEAD (G)
AUD2 PB FQ ADJ
AUD2 PB LVL ADJ
AUD2 HEAD (R)
AUD2 HEAD (P)
AUD2 HEAD (G)
L:AUD2/LTC
LTC MUTE
L:LTC PB
SEARCH1
SEARCH2
SEARCH3
CN1
CN2
CN4
CN5
Q1
Q2
Q3
Q4 DTC323TK
Q5 DTC323TK
Q6 DTC323TK
Q7 2SK208
Q8 2SK208
IC1 M5220P
IC2 M5220P
LPF1 PU6028G
LPF2 PU6028G
IC3 M51132L
IC4 M51132L
IC5 CXA1101P
Q11 2SD973AR
Q12 2SD973AR
Q9
Q10
TP1
TP2
GND1
L1 270
L2 270
REC IN
GND
PB IN
IREF
REC/PB
EE OUT
REC OUT
Vcc
Vcc/2
ON/OFF
ATT1
ATT2
ATT3
SC
DET
VCA1
VCA2
REF
NC
FILTER GND
PASS /VCA
MODE CTL
12V
GND
L:NR
AUD1 SIG OUT (X)
AUD1 SIG OUT (G)
AUD1 H:MUTE
AUD2 PB OUT (X)
AUD2 PB OUT (G)
AUD2 H:MUTE
TO 2 8 FM AUDIO
IC301
Vdd
Vss
IC302 M5220P
IC303 µPC393C
DA301
Q301 2SD973AR
Q302
L301 270
TP301
GND301
TC PB OUT (X)
2 2 NORMAL AUDIO

4.28 NORMAL AUDIO CIRCUIT BOARD (BR-S500)

— SOLDER Side —


NORMAL AUDIO
PRK10140-01-01
PRK10140
NORMAL AUDIO PWB
NORMAL AUDIO PWB ASS'Y
2 2
SCC 11
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC301
IC302
IC303
LPF1
LPF2
L1
L2
L301
DA301
CN1
CN2
CN4
CN5
TP1
TP2
TP301
GND1
GND301
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q301
Q302
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G

SYMBOL	No.	PB
I		C
IC1	1	5.5
	2	5.6
	3	5.6
	4	0.0
	5	5.6
	6	5.6
	7	5.5
	8	11.0
IC2	1	5.5
	2	5.6
	3	5.5
	4	0.0
	5	5.6
	6	5.6
	7	5.6
	8	11.0
IC3	1	11.1
	2	4.9
	3	4.4
	4	5.5
	5	11.0
	6	0.0
	7	0.0
	8	3.4
	9	0.0
	10	3.1

SYMBOL	No.	PE
IC3	11	0.0
	12	0.0
	13	4.4
	14	4.9
IC4	1	11.1
	2	4.9
	3	4.4
	4	5.5
	5	11.0
	6	0.0
	7	0.0
	8	3.5
	9	0.0
	10	4.1
	11	0.0
	12	0.0
	13	4.4
	14	4.9
IC5	1	5.9
	2	11.6
	3	5.9
	4	5.9
	5	0.0
	6	6.0
	7	0.0
	8	5.9
	9	5.9
	10	—

SYMBOL	No.	PB
IC5	11	6.0
	12	11.5
	13	1.2
	14	5.9
	15	0.0
	16	5.9
IC301	1	5.5
	2	5.5
	3	5.5
	4	5.5
	5	0.0
	6	0.0
	7	0.0
	8	5.4
	9	5.5
	10	0.0
	11	5.5
	12	11.0
	13	11.0
	14	11.0
IC302	1	5.5
	2	5.6
	3	5.6
	4	0.0
	5	5.5
	6	5.6
	7	5.5
	8	11.0

SYMBOL	No.	PB
IC303	1	0.0
	2	—
	3	1.7
	4	0.0
	5	0.3
	6	0.4
	7	0.0
	8	11.5
TRANSISTOR		
Q1	B	0.0
	C	10.6
	E	0.0
Q2	B	0.0
	C	0.9
	E	0.0
Q3	B	10.6
	C	0.0
	E	11.1
Q4	B	0.9
	C	0.0
	E	0.0
Q5	B	0.0
	C	0.0
	E	0.0

SYMBOL	No.	REC
Q6	B	0.0
	C	0.0
	E	0.0
Q7	B	5.5
	C	6.0
	E	5.5
Q8	B	5.5
	C	6.0
	E	5.5
Q9	B	0.0
	C	—
	E	0.0
Q10	B	0.0
	C	0.0
	E	0.0
Q11	B	11.8
	C	12.3
	E	11.1
Q12	B	12.2
	C	12.3
	E	11.6

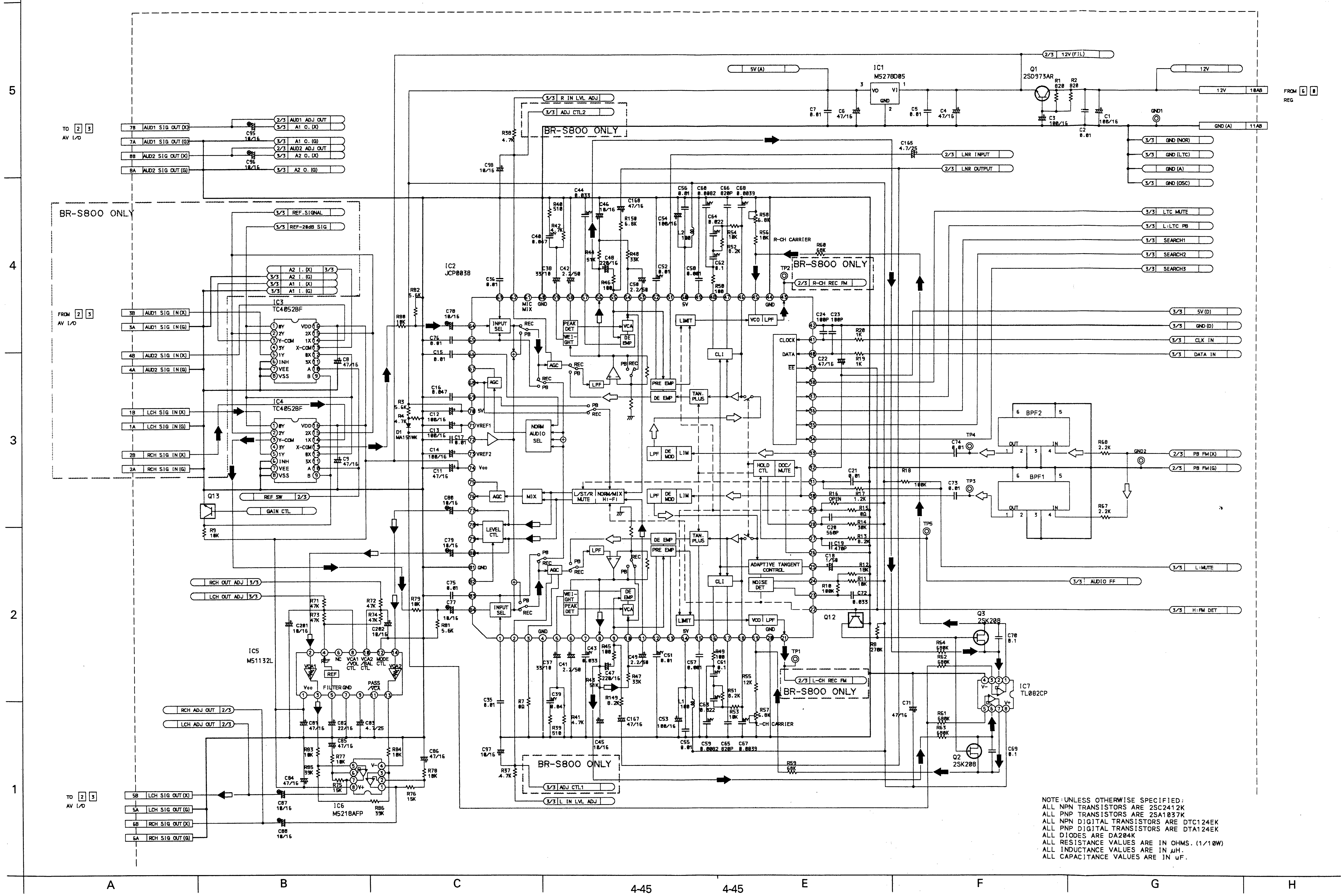
SYMBOL	No.	PB
Q301	B	12.1
	C	12.3
	E	11.5
Q302	B	5.6
	C	11.5
	E	4.9
CONNECTOR		
CN1	1	0.0
	2	0.0
	3	0.0
CN2	1	0.0
	2	0.0
	3	0.0

SYMBOL	No.	PB
CN4	1	0.0
	2	0.0
	3	0.0
	4	0.0
	5	12.3
	6	12.3
	7	12.3
	8	12.3
	9	0.0
	10	0.0
	11	0.0
	12	0.0
	13	2.6
	14	0.0
	15	0.0
	16	5.2
	17	0.7
	18	1.2
	19	0.0
	20	1.8
	21	1.4
	22	0.0
	23	0.0
	24	0.0
	25	0.0
	26	0.0
	27	0.0
	28	0.0
	29	0.0
	30	0.0

SYMBOL	No.	PB
CN5	1	0.0
	2	0.0
	3	0.0
	4	0.0
	5	0.0
	6	0.0
	7	0.0
	8	11.0
	9	0.0
	10	11.0
	11	0.0
	12	0.0
	13	5.2
	14	2.7
	15	1.5
	16	0.0
	17	1.8
	18	1.3
	19	0.0
	20	0.0
	21	0.0
	22	0.0
	23	0.0
	24	0.0
	25	0.0
	26	0.0
	27	0.0
	28	0.0
	29	0.0
	30	0.0

4.29 FM AUDIO SCHEMATIC DIAGRAM

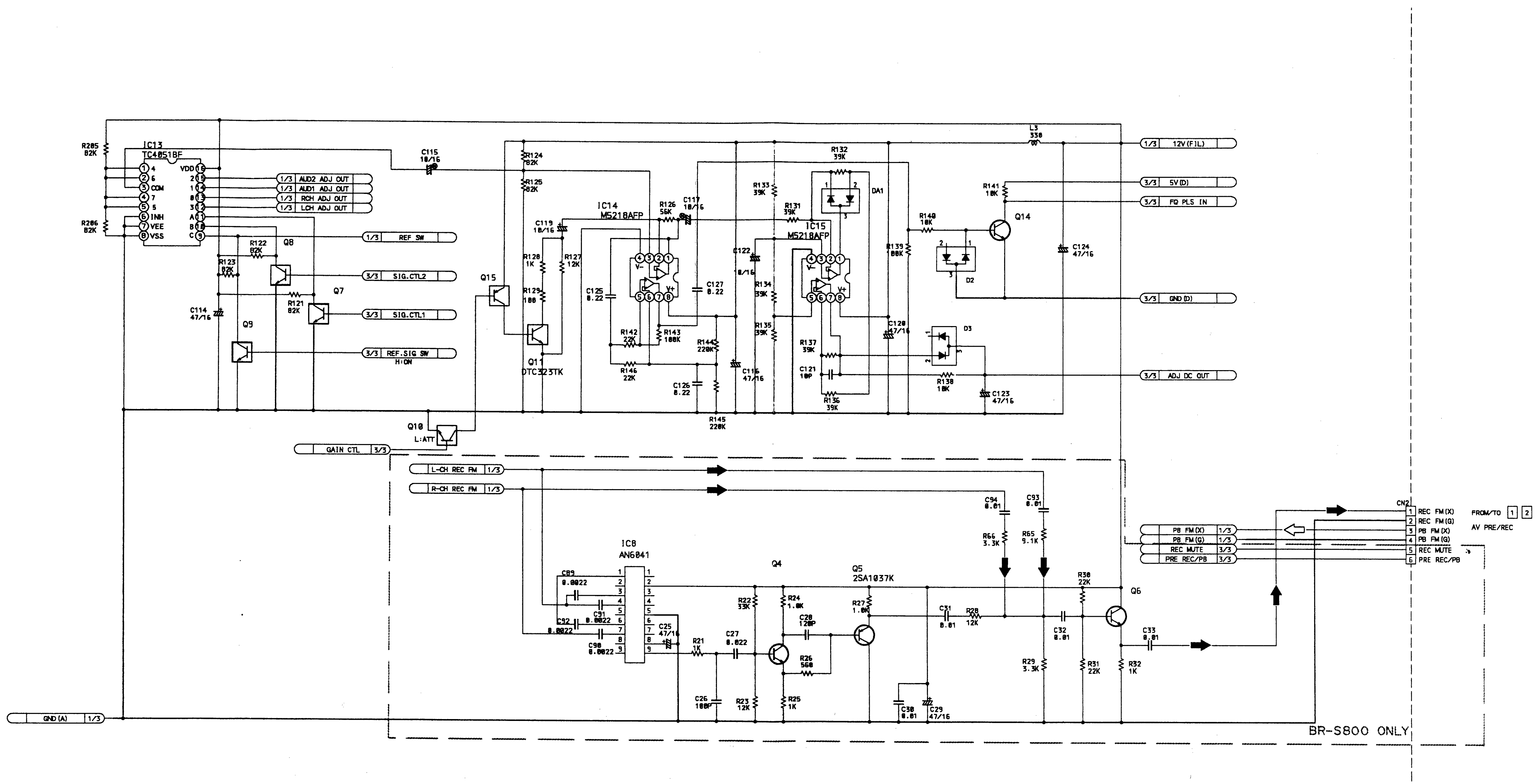
— DIAGRAM (1/3) —



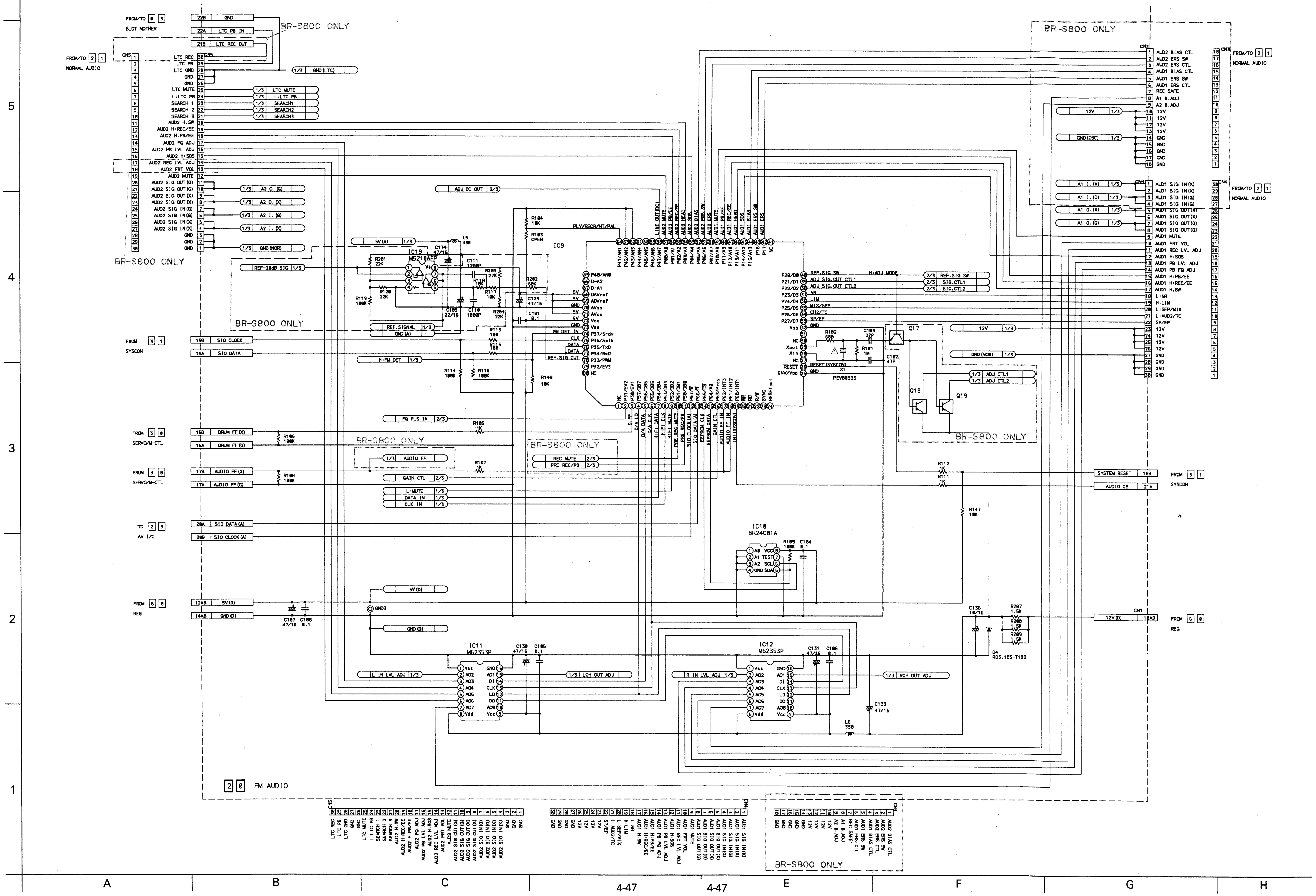
TO 2 3 AV I/O
FROM 2 3 AV I/O
FROM 6 8 REG
BR-S800 ONLY
IC1 M5278D05
Q1 2SD973AR
IC2 JCP8038
IC3 TC4052BF
IC4 TC4052BF
IC5 M51132L
IC6 M5218AFP
IC7 TL082CP
Q2 2SK208
Q3 2SK208
Q12
Q13
BPF1
BPF2
TP1
TP2
TP3
TP4
TP5
GND1
GND2
12V(FIL)
12V
5V(A)
GND(A)
GND(NOR)
GND(LTC)
GND(OSC)
LNR INPUT
LNR OUTPUT
LTC MUTE
L:LTC PB
SEARCH1
SEARCH2
SEARCH3
5V(D)
GND(D)
CLK IN
DATA IN
PB FM(X)
PB FM(G)
L:MUTE
AUDIO FF
H:FM DET
R IN LVL ADJ
ADJ CTL2
ADJ CTL1
L IN LVL ADJ
R-CH REC FM
L-CH REC FM
R-CH CARRIER
L-CH CARRIER
REF.SIGNAL
REF-20dB SIG
REF SW
GAIN CTL
AUD1 ADJ OUT
AUD2 ADJ OUT
AUD1 SIG OUT(X)
AUD1 SIG OUT(G)
AUD2 SIG OUT(X)
AUD2 SIG OUT(G)
AUD1 SIG IN(X)
AUD1 SIG IN(G)
AUD2 SIG IN(X)
AUD2 SIG IN(G)
LCH SIG IN(X)
LCH SIG IN(G)
RCH SIG IN(X)
RCH SIG IN(G)
LCH SIG OUT(X)
LCH SIG OUT(G)
RCH SIG OUT(X)
RCH SIG OUT(G)
RCH OUT ADJ
LCH OUT ADJ
RCH ADJ OUT
LCH ADJ OUT
INPUT SEL
AGC
LPF
PEAK DET
WEIGHT
VCA
DE EMP
PRE EMP
TAN. PLUS
LIMIT
LIM
CLI
VCO
CLOCK
DATA
EE
NORM AUDIO SEL
MIX
LEVEL CTL
L/ST/R MUTE
NORM/MIX HI-FI
HOLD CTL
DOC/MUTE
ADAPTIVE TANGENT CONTROL
NOISE DET
MIC MIX
VREF1
VREF2
Vcc
REC
PB
A
B
C
D
E
F
G
H
1
2
3
4
5
6

NOTE:UNLESS OTHERWISE SPECIFIED:
ALL NPN TRANSISTORS ARE 2SC2412K
ALL PNP TRANSISTORS ARE 2SA1037K
ALL NPN DIGITAL TRANSISTORS ARE DTC124EK
ALL PNP DIGITAL TRANSISTORS ARE DTA124EK
ALL DIODES ARE DA204K
ALL RESISTANCE VALUES ARE IN OHMS.(1/10W)
ALL INDUCTANCE VALUES ARE IN µH.
ALL CAPACITANCE VALUES ARE IN uF.

— DIAGRAM (2/3) —


R205
82K
IC13
TC4051BF
4
6
COM
7
5
INH
VEE
VSS
VDD
2
1
0
3
A
B
C
R206
82K
1/3 AUD2 ADJ OUT
1/3 AUD1 ADJ OUT
1/3 RCH ADJ OUT
1/3 LCH ADJ OUT
1/3 REF SW
3/3 SIG.CTL2
3/3 SIG.CTL1
3/3 REF.SIG SW
H:ON
R122
82K
Q8
R123
82K
R121
82K
Q7
C114
47/16
Q9
C115
10/16
R124
82K
R125
82K
C119
10/16
R128
1K
R127
12K
R129
100
Q15
Q11
DTC323TK
Q10
L:ATT
GAIN CTL 3/3
IC14
M5218AFP
R126
56K
C117
10/16
C125
0.22
V-
V+
C127
0.22
R142
22K
R143
100K
R146
22K
R144
220K
C126
0.22
R145
220K
C116
47/16
C122
10/16
R133
39K
R131
39K
R132
39K
DA1
IC15
M5218AFP
R134
39K
R135
39K
R137
39K
C121
10P
R136
39K
R139
100K
C120
47/16
L3
330
R140
10K
D2
R141
10K
Q14
C124
47/16
D3
R138
10K
C123
47/16
1/3 12V(FIL)
3/3 5V(D)
3/3 FQ PLS IN
3/3 GND(D)
3/3 ADJ DC OUT
L-CH REC FM 1/3
R-CH REC FM 1/3
IC8
AN6041
C89
0.0022
C91
0.0022
C92
0.0022
C90
0.0022
C25
47/16
R21
1K
C26
100P
C27
0.022
R22
33K
R23
12K
Q4
R24
1.0K
C28
120P
R26
560
R25
1K
Q5
2SA1037K
R27
1.0K
C30
0.01
C29
47/16
C31
0.01
R28
12K
C94
0.01
R66
3.3K
C93
0.01
R65
9.1K
R29
3.3K
C32
0.01
R30
22K
R31
22K
Q6
R32
1K
C33
0.01
PB FM(X) 1/3
PB FM(G) 1/3
REC MUTE 3/3
PRE REC/PB 3/3
CN2
1 REC FM(X)
2 REC FM(G)
3 PB FM(X)
4 PB FM(G)
5 REC MUTE
6 PRE REC/PB
FROM/TO 1 2
AV PRE/REC
GND(A) 1/3
BR-S800 ONLY
6
5
4
3
2
1

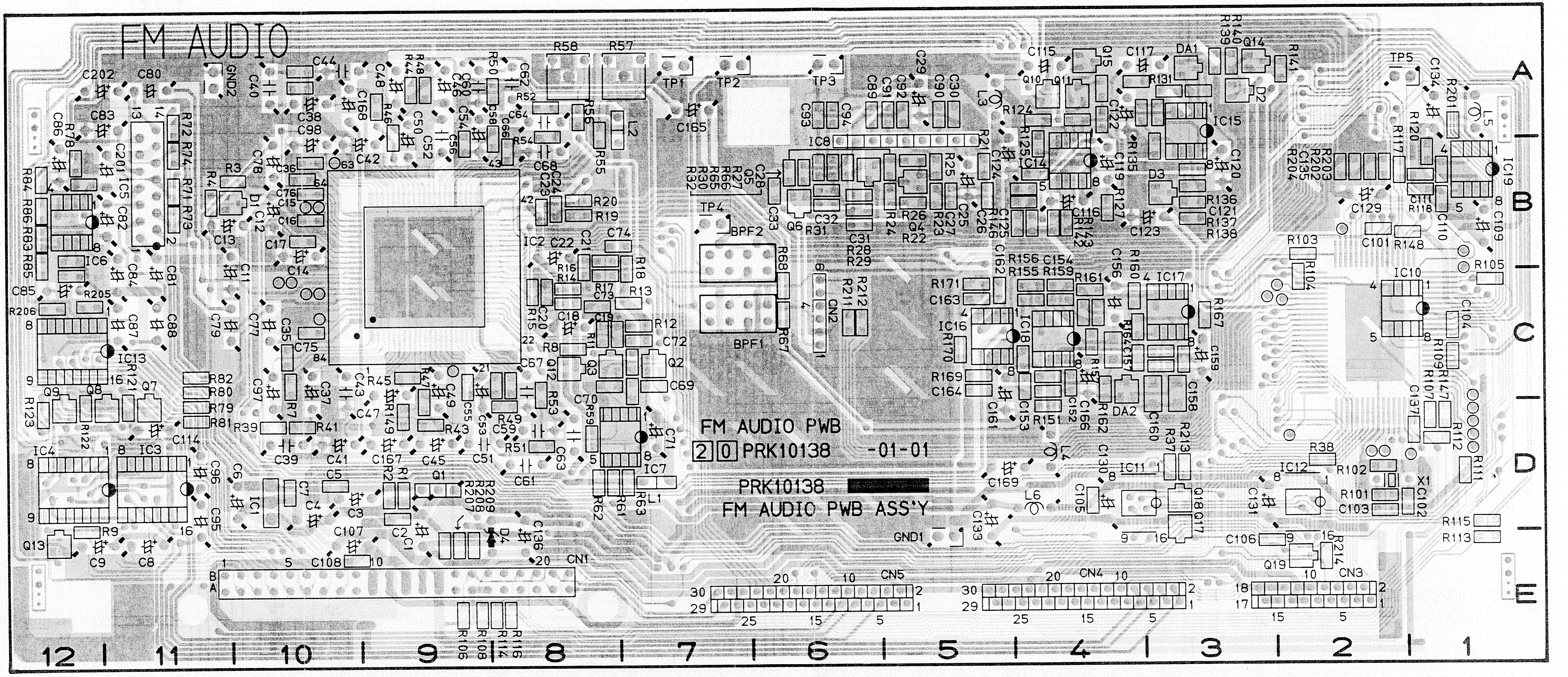
— DIAGRAM (3/3) —



6
5
4
3
2
1
A
B
C
D
E
F
G
H
FROM/TO 8 5 SLOT MOTHER
FROM/TO 2 1 NORMAL AUDIO
CN5
BR-S800 ONLY
LTC PB IN
LTC REC OUT
GND (LTC)
LTC MUTE
L:LTC PB
SEARCH1
SEARCH2
SEARCH3
A2 O. (G)
A2 O. (X)
A2 I. (G)
A2 I. (X)
GND (NOR)
REF-20dB SIG
FROM 3 1 SYSCON
SIO CLOCK
SIO DATA
H:FM DET
5V (A)
IC19 M5218AFP
REF.SIGNAL
GND (A)
ADJ DC OUT
IC9
PLY/RECR/NT/PAL
FROM 3 8 SERVO/M-CTL
DRUM FF (X)
DRUM FF (G)
FQ PLS IN
AUDIO FF
FROM 3 8 SERVO/M-CTL
AUDIO FF (X)
AUDIO FF (G)
GAIN CTL
L:MUTE
DATA IN
CLK IN
REC MUTE
PRE REC/PB
TO 2 5 AV I/O
SIO DATA (A)
SIO CLOCK (A)
FROM 6 8 REG
5V (D)
GND (D)
GND3
IC10 BR24C01A
IC11 M62353P
IC12 M62353P
L IN LVL ADJ
LCH OUT ADJ
R IN LVL ADJ
RCH OUT ADJ
Q17
Q18
Q19
X1 PEV00335
REF.SIG SW
SIG.CTL1
SIG.CTL2
ADJ CTL1
ADJ CTL2
12V
GND (OSC)
GND (NOR)
A1 I. (X)
A1 I. (G)
A1 O. (X)
A1 O. (G)
CN3
CN4
CN1
FROM/TO 2 1 NORMAL AUDIO
SYSTEM RESET
AUDIO CS
FROM 3 1 SYSCON
12V (D)
FROM 6 8 REG
D4 RD5.1ES-T1B2
2 0 FM AUDIO

4.30 FM AUDIO CIRCUIT BOARD

— SOLDER Side —


FM AUDIO
FM AUDIO PWB
2 0 PRK10138 -01-01
PRK10138
FM AUDIO PWB ASS'Y
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC10
IC11
IC12
IC13
IC14
IC15
IC16
IC17
IC18
IC19
CN1
CN2
CN3
CN4
CN5
TP1
TP2
TP3
TP4
TP5
BPF1
BPF2
GND1
GND2
DA1
DA2
X1
L1
L2
L3
L4
L5
L6
A
B
C
D
E
12
11
10
9
8
7
6
5
4
3
2
1

A B C D E F G H

1 2 3 4 5 6

— DC Voltage (1/2) —

SYMBOL No.		REC	PB
INTEGRATED CIRCUIT			
IC1	1	11.1	11.0
	2	0.0	0.0
	3	5.1	5.1
IC2	1	2.6	2.6
	2	3.0	3.1
	3	0.0	0.0
	4	0.0	0.0
	5	2.2	2.5
	6	1.5	1.5
	7	2.6	2.6
	8	2.6	2.5
	9	2.6	2.6
	10	2.5	2.5
	11	2.5	2.6
	12	2.6	2.5
	13	2.6	2.5
	14	5.1	5.1
	15	—	2.5
	16	—	2.6
	17	—	2.6
	18	—	2.5
	19	2.4	2.4
	20	—	0.0
	21	2.6	—
	22	0.0	0.2
	23	—	0.1
	24	3.5	3.3
	25	—	3.4
	26	0.0	0.0
	27	2.4	2.4
	28	5.1	0.1
	29	0.0	0.0
	30	0.0	2.6
	31	5.2	0.7
	32	5.2	5.2
	33	0.1	2.6
	34	10.2	10.1
	35	0.1	0.1
	36	10.2	10.0
	37	0.1	0.1
	38	0.0	0.0
	39	0.1	0.2
	40	2.6	0.1
	41	0.1	0.1
	42	3.1	0.0
	43	1.9	0.2
	44	0.0	0.0
	45	2.4	2.4
	46	2.3	2.3
	47	—	2.5
	48	—	2.5
	49	—	2.6
	50	5.1	5.1
	51	2.6	2.5
	52	2.6	2.5
	53	2.6	2.6
	54	2.5	2.5
	55	2.6	2.6
	56	2.6	2.5
	57	2.6	2.6
	58	1.5	1.5
	59	2.6	2.5
	60	0.0	0.0
	61	2.9	2.9
	62	1.9	2.5
	63	2.6	2.6
	64	2.6	2.8
	65	—	9.5
	66	2.6	2.7
	67	2.8	2.8
	68	2.0	2.0
	69	2.5	2.8
	70	5.1	5.1
	71	2.6	2.6
	72	0.7	3.6
	73	5.8	5.8
	74	11.0	11.0
	75	0.0	1.5
	76	5.8	5.7
	77	5.7	5.7
	78	5.8	3.1
	79	5.7	5.7
	80	5.7	5.7
	81	—	0.0
	82	1.1	—
	83	0.6	2.6
	84	—	—
IC3	1	2.5	2.5
	2	1.9	1.9
	3	5.7	5.7
	4	0.8	1.6
	5	5.7	5.7
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.0
	10	10.9	9.2
	11	0.8	1.5
	12	2.5	2.5
	13	5.7	5.7
	14	5.7	5.7
	15	1.9	1.9
	16	11.0	11.0
IC4	1	2.5	2.5
	2	1.9	1.9
	3	5.2	5.3
	4	0.5	3.3
	5	5.3	5.3
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.0
	10	10.7	10.2
	11	1.9	3.1
	12	2.5	2.5
	13	5.2	5.2
	14	5.2	5.3
	15	1.9	1.9
	16	11.0	11.0
IC5	1	11.0	11.0
	2	4.4	4.9
	3	4.4	4.4
	4	5.6	5.6
	5	10.9	10.7
	6	0.0	1.2
	7	0.0	0.0
	8	3.3	3.4
	9	0.0	0.1
	10	3.3	3.3
	11	0.0	0.0
	12	0.0	0.0
	13	4.4	4.4
	14	4.8	4.5
IC6	1	5.7	5.7
	2	5.8	5.7
	3	5.8	5.8
	4	0.0	0.0
	5	5.8	5.7
	6	5.8	5.8
	7	5.8	5.8
	8	11.0	11.0
IC7	1	2.6	2.6
	2	2.6	2.6
	3	2.4	2.4
	4	0.0	0.0
	5	2.6	2.4
	6	2.6	2.6
	7	2.6	2.6
	8	5.1	5.1
IC8	1	8.2	7.9
	2	11.1	11.0
	3	2.6	2.6
	4	7.4	7.5
	5	0.0	0.0
	6	7.4	7.5
	7	2.6	2.6
	8	7.5	7.5
	9	7.9	7.9
IC9	1	0.0	1.3
	2	5.2	5.2
	3	2.4	2.4
	4	0.0	0.0
	5	0.2	0.3
	6	4.5	4.5
	7	0.0	0.0
	8	0.1	0.1
	9	5.2	5.2
	10	5.2	5.2
	11	0.0	0.0
	12	0.0	0.0
	13	0.0	0.0
	14	5.2	5.2
	15	5.2	5.2
	16	5.2	5.2
	17	2.4	2.4
	18	2.4	2.4
	19	2.5	2.5
	20	5.0	5.0
	21	3.3	3.3
	22	4.8	4.8
	23	1.4	1.4
	24	0.0	0.0
	25	0.0	0.0
	26	5.2	5.2
	27	0.0	0.0
	28	2.6	2.6
	29	2.3	2.6
	30	0.0	0.0
	31	2.6	2.6
	32	0.0	0.0
	33	0.0	0.0
	34	0.0	0.0
	35	0.0	0.0
	36	5.2	5.2
	37	0.0	0.0
	38	0.0	0.0
	39	0.0	0.0
	40	0.0	0.0
	41	—	0.0
	42	5.2	0.0
	43	5.2	0.0
	44	5.1	0.0
	45	0.0	0.0
	46	5.2	0.0
	47	5.2	0.0
	48	0.0	0.0
	49	0.0	0.0
	50	5.2	0.0
	51	5.2	0.0
	52	5.1	0.0
	53	0.0	0.0
	54	5.2	0.0
	55	5.2	0.0
	56	0.0	0.0
	57	0.0	0.0
	58	2.3	1.9
	59	1.2	1.3
	60	1.2	1.5
	61	1.1	1.4
	62	0.0	0.0
	63	0.0	0.0
	64	0.0	0.5
	65	—	—
	66	2.5	2.5
	67	2.5	1.9
	68	5.0	5.0
	69	5.0	5.0
	70	0.0	0.0
	71	5.0	5.0
	72	5.2	5.2
	73	0.0	0.0
	74	0.1	2.8
	75	5.0	2.6
	76	4.2	4.0
	77	4.1	4.1
	78	0.0	0.0
	79	1.5	—
	80	1.3	1.7
IC10	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	5.2	5.2
	6	5.2	5.2
	7	0.0	0.0
	8	5.2	5.2
IC11	1	0.0	0.0
	2	3.1	3.1
	3	2.0	3.5
	4	1.2	1.2
	5	1.8	2.3
	6	2.1	2.2
	7	3.2	4.5
	8	5.1	5.1
	9	5.1	5.1
	10	0.0	0.0
	11	4.1	4.2
	12	0.0	0.0
	13	4.5	4.6
	14	0.2	0.2
	15	1.0	1.3
	16	0.0	0.0
IC12	1	0.0	0.0
	2	2.9	3.1
	3	2.2	1.3
	4	1.2	0.9
	5	1.8	0.3
	6	2.0	2.1
	7	3.2	5.1
	8	5.1	5.1
	9	5.1	5.1
	10	0.0	0.0
	11	4.1	4.2
	12	0.0	0.0
	13	4.5	—
	14	4.1	—
	15	1.0	1.1
	16	0.0	0.0
IC13	1	5.3	5.5
	2	5.5	5.5
	3	5.5	5.5
	4	5.5	5.5
	5	5.5	5.4
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	10.9	10.6
	10	10.9	10.6
	11	10.9	10.6
	12	5.6	5.6
	13	5.5	5.6
	14	5.5	5.6
	15	5.5	5.6
	16	11.0	11.0
IC14	1	5.5	5.5
	2	5.5	5.5
	3	5.2	5.4
	4	0.0	0.0
	5	2.8	2.9
	6	7.0	3.6
	7	10.3	1.3
	8	11.0	11.0
IC15	1	8.0	8.0
	2	7.3	7.3
	3	7.3	7.2
	4	0.0	0.0
	5	3.7	3.6
	6	3.7	3.7
	7	1.9	1.9
	8	11.0	1.3
IC19	1	2.5	2.5
	2	2.5	2.5
	3	2.5	2.5
	4	0.0	0.0
	5	1.9	1.9
	6	1.9	1.9
	7	1.9	1.9
	8	5.0	5.0
TRANSISTOR			
Q1	B	11.7	11.7
	C	12.0	12.1
	E	11.0	11.0
Q2	B	2.6	2.6
	C	3.1	3.1
	E	2.6	2.6
Q3	B	2.6	2.6
	C	3.1	3.1
	E	2.6	2.6
Q4	B	2.8	2.8
	C	8.9	8.9
	E	2.2	2.2
Q5	B	2.2	2.3
	C	0.0	0.0
	E	2.9	2.9
Q6	B	5.3	5.3
	C	11.0	11.0
	E	4.6	2.7

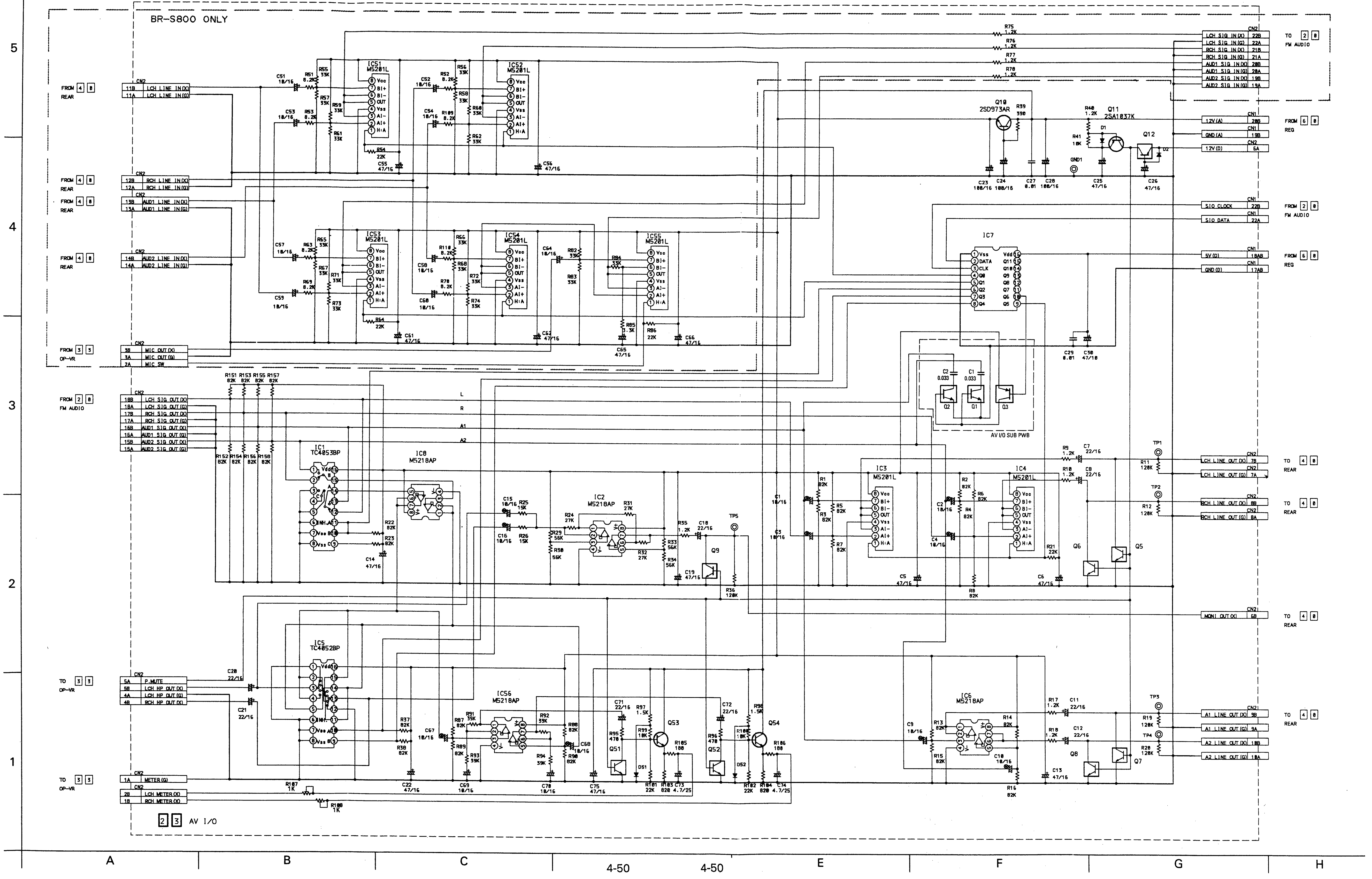
— DC Voltage (2/2) —

SYMBOL No.		REC	PB
Q7	B	0.0	0.0
	C	9.5	10.8
	E	0.0	0.0
Q8	B	0.0	0.0
	C	9.5	10.8
	E	0.0	0.0
Q9	B	0.0	0.0
	C	9.6	10.8
	E	0.0	0.0
Q10	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q11	B	10.9	10.9
	C	0.0	0.0
	E	0.0	0.0
Q12	B	0.1	0.2
	C	3.1	3.1
	E	0.0	0.0
Q13	B	5.2	5.2
	C	0.0	0.0
	E	0.0	0.0
Q14	B	0.0	0.0
	C	5.2	5.2
	E	0.0	0.0
Q15	B	0.0	0.0
	C	10.9	10.9
	E	11.0	11.0
Q17	B	0.0	0.0
	C	5.0	5.1
	E	0.0	0.0
Q18	B	5.0	5.1
	C	3.0	3.1
	E	5.1	5.1
Q19	B	5.1	5.1
	C	3.0	3.1
	E	5.1	5.1
CONNECTOR			
CN1	1A	0.0	0.0
	1B	5.3	0.0
	2A	0.0	0.0
	2B	5.2	5.2
	3A	0.0	0.0
	3B	5.7	5.7
	4A	0.0	0.0
	4B	5.7	5.7
	5A	0.0	0.0
	5B	5.5	5.5
	6A	0.0	0.0
	6B	5.5	5.5
	7A	0.0	0.0
	7B	5.6	5.5
	8A	0.0	0.0
	8B	5.6	5.5
	9A	5.3	5.3
	9B	5.3	5.3
	10A	12.1	12.1
	10B	12.1	12.1
	11A	0.0	0.0
	11B	0.0	0.0
	12A	5.2	5.2
	12B	5.2	5.2
	13A	12.9	12.9
	13B	12.9	12.9
	14A	0.0	0.0
	14B	0.0	0.0
	15A	4.6	1.2
	15B	4.6	1.2
	16A	0.0	0.0
	16B	2.4	2.4
	17A	0.0	0.0
	17B	2.4	2.4
	18A	4.5	0.7
	18B	5.2	5.2
	19A	4.1	4.1
	19B	5.0	5.0
	20A	0.0	0.0
	20B	0.0	0.0
	21A	2.5	2.6
	21B	3.3	2.1
	22A	0.0	0.0
	22B	0.0	0.0
CN2	1	2.8	2.9
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	0.0	5.2
	6	5.0	0.0
CN3	1	5.1	0.0
	2	5.2	0.0
	3	5.2	0.0
	4	5.1	0.0
	5	5.2	0.0
	6	5.2	0.0
	7	—	0.9
	8	4.5	4.5
	9	5.1	5.1
	10	12.0	12.1
	11	12.0	12.1
	12	12.0	12.1
	13	12.0	12.1
	14	0.0	0.0
	15	0.0	0.0
	16	0.0	0.0
	17	0.0	0.0
	18	0.0	0.0
CN4	1	5.7	5.7
	2	5.7	5.7
	3	0.8	0.0
	4	0.8	0.0
	5	—	0.2
	6	—	0.1
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.7
	10	2.0	2.1
	11	2.3	2.3
	12	0.0	0.0
	13	0.9	0.9
	14	1.2	1.3
	15	0.0	5.2
	16	5.2	0.0
	17	5.2	0.0
	18	0.0	0.0
	19	5.2	5.2
	20	0.0	0.0
	21	—	0.0
	22	0.0	0.0
	23	12.0	12.1
	24	12.0	12.1
	25	12.0	12.1
	26	12.0	12.1
	27	0.0	0.0
	28	0.0	0.0
	29	0.0	0.0
	30	0.0	0.0
CN5	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	5.7	5.7
	5	5.7	5.7
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.1
	10	0.0	0.0
	11	0.0	0.0
	12	0.0	0.0
	13	2.2	2.2
	14	2.3	2.3
	15	0.0	0.0
	16	1.2	1.2
	17	3.5	3.5
	18	0.0	5.2
	19	5.2	0.0
	20	5.2	0.0
	21	10.2	9.1
	22	0.1	0.1
	23	10.2	9.2
	24	0.1	0.1
	25	0.0	0.0
	26	0.0	0.0
	27	0.0	0.0
	28	0.0	0.0
	29	0.0	0.0
	30	2.7	—

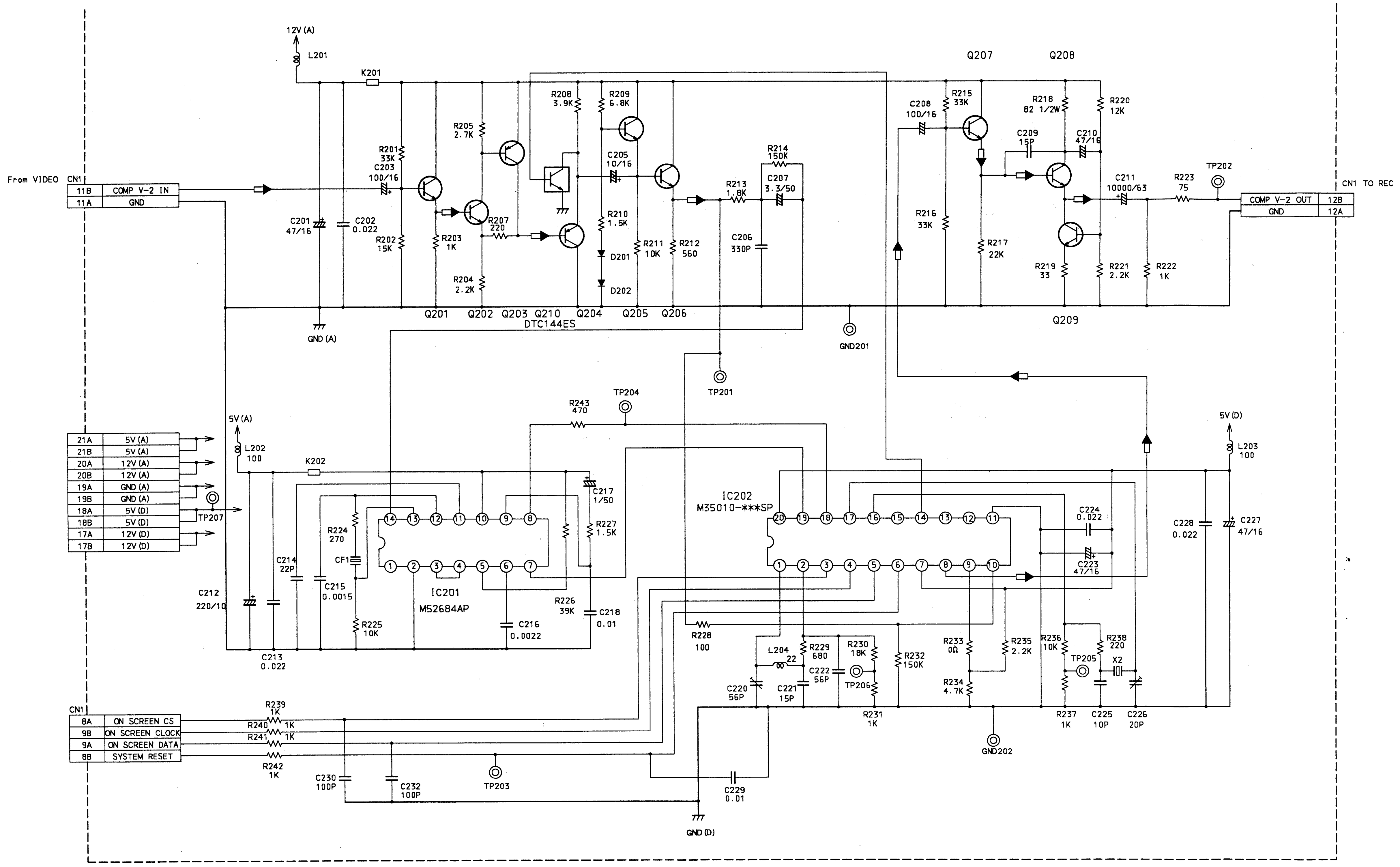
4.31 AV I/O SCHEMATIC DIAGRAM

— DIAGRAM (1/2) —

NOTE:UNLESS OTHERWISE SPECIFIED:
ALL NPN TRANSISTORS ARE 2SC2412K
ALL PNP TRANSISTORS ARE 2SA1037K
ALL NPN DIGITAL TRANSISTORS ARE DTC323TK
ALL PNP DIGITAL TRANSISTORS ARE DTA124EK
ALL DIODES ARE MA151WK
ALL RESISTANCE VALUES ARE IN OHMS. (#/#W)
ALL INDUCTANCE VALUES ARE IN μH.
ALL CAPACITANCE VALUES ARE IN uF.

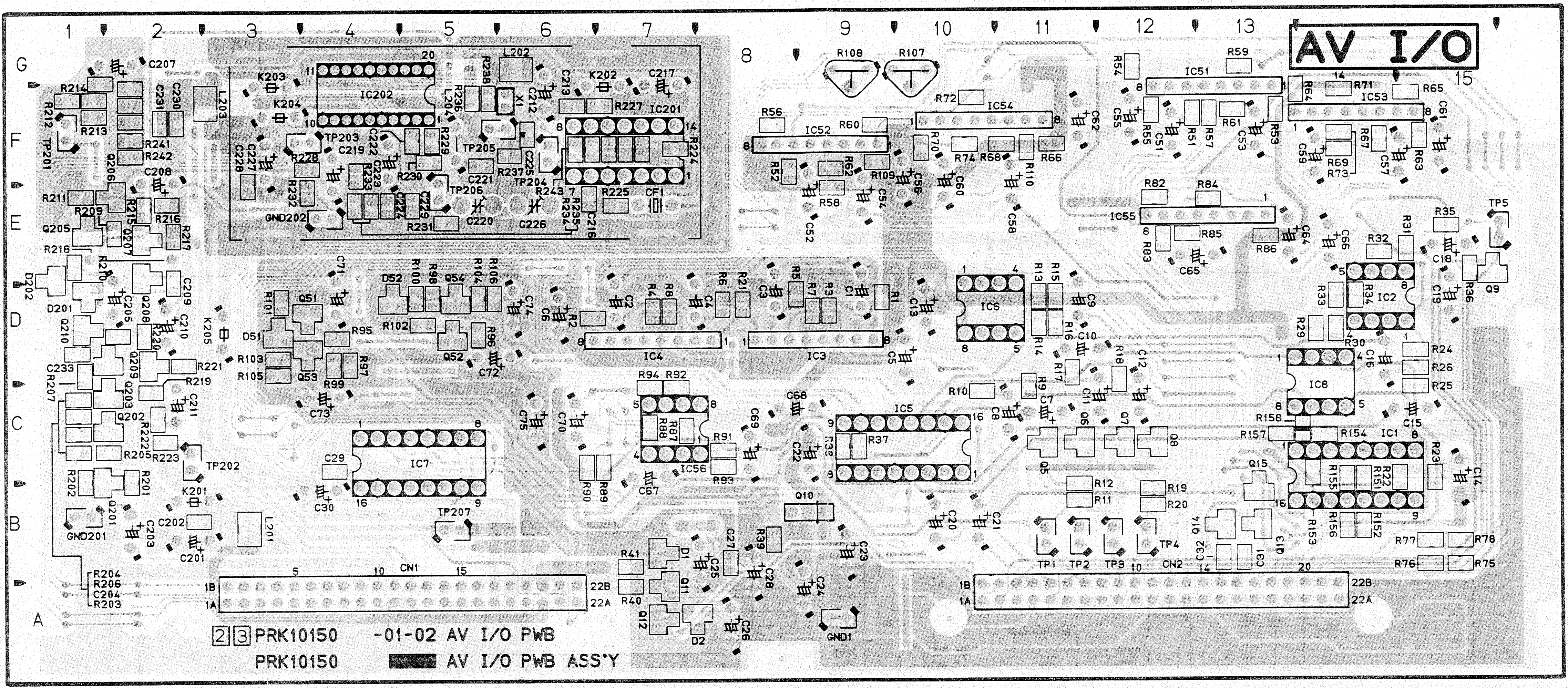

6
5
4
3
2
1
A
B
C
E
F
G
H
BR-S800 ONLY
FROM 4 8 REAR
CN2
11B LCH LINE IN(X)
11A LCH LINE IN(G)
12B RCH LINE IN(X)
12A RCH LINE IN(G)
13B AUD1 LINE IN(X)
13A AUD1 LINE IN(G)
14B AUD2 LINE IN(X)
14A AUD2 LINE IN(G)
FROM 3 3 OP-VR
3B MIC OUT(X)
3A MIC OUT(G)
2A MIC SW
FROM 2 8 FM AUDIO
18B LCH SIG OUT(X)
18A LCH SIG OUT(G)
17B RCH SIG OUT(X)
17A RCH SIG OUT(G)
16B AUD1 SIG OUT(X)
16A AUD1 SIG OUT(G)
15B AUD2 SIG OUT(X)
15A AUD2 SIG OUT(G)
TO 3 3 OP-VR
5A P.MUTE
5B LCH HP OUT(X)
4A LCH HP OUT(G)
4B RCH HP OUT(X)
1A METER(G)
2B LCH METER(X)
1B RCH METER(X)
2 3 AV I/O
IC51 M5201L
IC52 M5201L
IC53 M5201L
IC54 M5201L
IC55 M5201L
IC1 TC4053BP
IC8 M5218AP
IC2 M5218AP
IC3 M5201L
IC4 M5201L
IC5 TC4052BP
IC56 M5218AP
IC6 M5218AP
IC7
Q10 2SD973AR
Q11 2SA1037K
Q12
Q1
Q2
Q3
AV I/O SUB PWB
Q5
Q6
Q7
Q8
Q9
Q51
Q52
Q53
Q54
TP1
TP2
TP3
TP4
TP5
GND1
L
R
A1
A2
TO 2 8 FM AUDIO
LCH SIG IN(X) 22B
LCH SIG IN(G) 22A
RCH SIG IN(X) 21B
RCH SIG IN(G) 21A
AUD1 SIG IN(X) 20B
AUD1 SIG IN(G) 20A
AUD2 SIG IN(X) 19B
AUD2 SIG IN(G) 19A
FROM 6 8 REG
CN1
12V(A) 20B
GND(A) 19B
CN2
12V(D) 6A
FROM 2 8 FM AUDIO
SIO CLOCK 22B
SIO DATA 22A
FROM 6 8 REG
5V(D) 18AB
GND(D) 17AB
TO 4 8 REAR
LCH LINE OUT(X) 7B
LCH LINE OUT(G) 7A
RCH LINE OUT(X) 8B
RCH LINE OUT(G) 8A
MONI OUT(X) 6B
A1 LINE OUT(X) 9B
A1 LINE OUT(G) 9A
A2 LINE OUT(X) 10B
A2 LINE OUT(G) 10A

— DIAGRAM (2/2) —

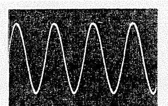
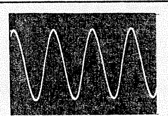
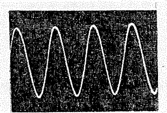
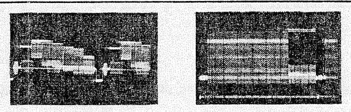
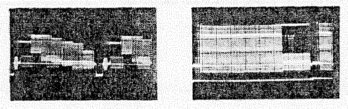
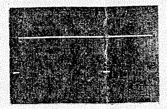


From VIDEO CN1
11B COMP V-2 IN
11A GND
12V (A)
L201
K201
R201 33K
C203 100/16
C201 47/16
C202 0.022
R202 15K
R203 1K
R205 2.7K
R207 220
R204 2.2K
R208 3.9K
R209 6.8K
C205 10/16
R210 1.5K
D201
D202
R211 10K
R212 560
R213 1.8K
R214 150K
C207 3.3/50
C206 330P
Q201 Q202 Q203 Q210 Q204 Q205 Q206
DTC144ES
GND (A)
GND201
TP201
Q207
Q208
C208 100/16
R215 33K
R216 33K
R217 22K
R218 82 1/2W
C209 15P
C210 47/16
R220 12K
C211 10000/63
R223 75
TP202
R219 33
R221 2.2K
R222 1K
Q209
COMP V-2 OUT 12B
GND 12A
CN1 TO REC
21A 5V (A)
21B 5V (A)
20A 12V (A)
20B 12V (A)
19A GND (A)
19B GND (A)
18A 5V (D)
18B 5V (D)
17A 12V (D)
17B 12V (D)
TP207
5V (A)
L202 100
K202
C212 220/10
C213 0.022
C214 22P
C215 0.0015
R224 270
CF1
R225 10K
IC201
M52684AP
C216 0.0022
R226 39K
C218 0.01
C217 1/50
R227 1.5K
R243 470
TP204
IC202
M35010-***SP
R228 100
L204 22
R229 680
C220 56P
C221 15P
C222 56P
R230 18K
TP206
R231 1K
R232 150K
R233 0Ω
R234 4.7K
R235 2.2K
GND202
R236 10K
R237 1K
TP205
R238 220
X2
C225 10P
C226 20P
C224 0.022
C223 47/16
C228 0.022
C227 47/16
5V (D)
L203 100
CN1
8A ON SCREEN CS
9B ON SCREEN CLOCK
9A ON SCREEN DATA
8B SYSTEM RESET
R239 1K
R240 1K
R241 1K
R242 1K
C230 100P
C232 100P
TP203
C229 0.01
GND (D)
1 2 3 4 5 6
A B C E F G H

4.32 AV I/O CIRCUIT BOARD


AV I/O
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC51
IC52
IC53
IC54
IC55
IC56
IC201
IC202
CN1
CN2
TP1
TP2
TP3
TP4
TP5
TP201
TP202
TP203
TP204
TP205
TP206
TP207
GND1
GND201
GND202
2 3 PRK10150 -01-02 AV I/O PWB
PRK10150 AV I/O PWB ASS'Y

— MAIN WAVEFSORMS OF AV I/O CIRCUIT —

TP1 & TP2	TP3 & TP4	TP5	TP201	TP202	TP204
					
[PB] 1.1 Vp-p	[PB] 0.9 Vp-p	[PB] 1.2 Vp-p	1.0 Vp-p — H-rate — — V-rate —	1.1 Vp-p — H-rate — — V-rate —	4.3 Vp-p (15.75 kHz)

— DC Voltage —

SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC1	1	5.6	5.6
	2	5.7	5.6
	3	0.0	0.0
	4	0.0	0.0
	5	0.0	0.0
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	11.2	11.2
	10	0.0	0.0
	11	0.0	0.0
	12	5.6	5.6
	13	5.5	5.6
	14	5.6	5.6
	15	5.6	5.5
	16	11.3	11.3
IC2	1	5.6	5.6
	2	5.6	5.6
	3	5.6	5.6
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.8	5.8
	8	11.3	11.3
IC3	1	11.1	11.3
	2	5.6	5.7
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.6	5.7
	8	11.3	11.3
IC4	1	11.3	11.3
	2	5.6	5.7
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.7	5.7
	8	11.3	11.3
IC5	1	0.0	0.0
	2	5.6	5.6
	3	5.6	5.6
	4	5.6	5.6
	5	5.7	5.6
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	11.2	11.2
	10	10.8	11.2
	11	5.7	5.6
	12	0.0	0.0
	13	5.7	5.6
	14	5.7	5.6
	15	5.6	5.6
	16	11.3	11.3
IC6	1	5.6	5.6
	2	5.6	5.6
	3	5.6	5.6
	4	0.0	0.0
	5	5.6	5.6
	6	5.6	5.7
	7	5.6	5.7
	8	11.3	11.3
IC7	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	0.1	0.0
	5	0.1	0.0
	6	0.0	0.0
	7	10.4	11.2
	8	10.6	11.2
	9	11.0	11.3
	10	10.8	11.3
	11	0.0	0.0
	12	0.0	0.0
	13	0.0	0.0
	14	0.0	0.0
	15	0.0	0.0
	16	5.2	5.2
IC8	1	5.7	5.6
	2	5.7	5.5
	3	5.7	5.5
	4	0.0	0.0
	5	5.6	5.6
	6	5.6	5.6
	7	5.6	5.6
	8	11.3	11.3
IC51	1	0.1	0.1
	2	5.6	5.6
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.7	5.7
	8	11.3	11.3
IC52	1	0.1	0.1
	2	5.7	5.7
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.6	5.7
	8	11.3	11.3
IC53	1	0.1	0.1
	2	5.6	5.6
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.7	5.7
	8	11.3	11.3
IC54	1	0.1	0.1
	2	5.7	5.7
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.7	5.7
	8	11.3	11.3
IC55	1	11.3	11.3
	2	5.7	5.7
	3	5.7	5.7
	4	0.0	0.0
	5	5.7	5.7
	6	5.7	5.7
	7	5.7	5.7
	8	11.3	11.3
IC56	1	5.7	5.7
	2	5.7	5.7
	3	5.7	5.7
	4	0.0	0.0
	5	5.6	5.7
	6	5.7	5.7
	7	5.7	5.7
	8	11.3	11.3
IC201	1	0.9	0.9
	2	0.0	0.0
	3	1.0	1.0
	4	1.0	1.0
	5	3.4	3.4
	6	0.2	0.2
	7	4.4	4.4
	8	4.1	4.1
	9	2.7	2.7
	10	5.2	5.2
	11	2.1	2.1
	12	2.2	2.2
	13	3.0	3.0
	14	3.7	3.7
IC202	1	2.3	2.3
	2	2.3	2.3
	3	3.5	3.7
	4	4.8	4.8
	5	0.7	0.8
	6	5.2	5.2
	7	5.1	5.1
	8	2.6	2.6
	9	3.4	3.4
	10	2.6	2.6
	11	0.0	0.0
	12	0.0	0.0
	13	0.0	0.0
	14	0.0	0.0
	15	0.0	0.0
	16	2.3	2.3
	17	2.2	2.2
	18	4.2	4.2
	19	4.4	4.4
	20	5.1	5.1
TRANSISTOR			
Q1	B	0.6	0.0
	C	3.2	0.0
	E	0.0	0.0
Q2	B	0.5	0.5
	C	3.2	2.6
	E	0.0	0.0
Q3	B	11.1	11.3
	C	0.5	0.0
	E	11.3	11.3
Q5	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q6	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q7	B	0.0	0.0
	C	0.0	0.1
	E	0.0	0.0
Q8	B	0.0	0.0
	C	0.0	0.2
	E	0.0	0.0
Q9	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q10	B	12.0	12.0
	C	12.1	12.1
	E	11.3	11.3
Q11	B	12.1	12.1
	C	0.0	0.4
	E	0.0	12.0
Q12	B	12.9	12.8
	C	0.0	0.4
	E	12.9	12.9
Q51	B	0.5	0.0
	C	0.5	0.5
	E	0.0	0.0
Q52	B	0.5	0.0
	C	0.5	0.5
	E	0.0	0.0
Q53	B	0.5	0.5
	C	12.1	12.1
	E	0.0	0.0
Q54	B	0.5	0.5
	C	12.1	12.1
	E	0.0	0.0
Q201	B	3.5	3.5
	C	11.7	11.7
	E	2.8	2.8
Q202	B	2.8	2.8
	C	11.0	11.0
	E	2.3	2.4
Q203	B	11.0	11.0
	C	2.4	2.5
	E	11.7	11.7
Q204	B	2.5	2.5
	C	0.0	0.0
	E	2.9	2.8
Q205	B	3.1	3.1
	C	11.7	11.7
	E	3.2	3.1
Q206	B	3.1	3.1
	C	11.7	11.7
	E	2.6	2.6
Q207	B	5.8	5.8
	C	11.7	11.7
	E	5.4	5.4
Q208	B	5.4	5.4
	C	9.3	9.3
	E	4.6	4.6
Q209	B	1.6	1.6
	C	4.6	4.6
	E	1.0	1.0
Q210	B	0.0	0.0
	C	2.9	2.8
	E	0.0	0.0
CONNECTOR			
CN1	1 AB	0.4	0.0
	2A	0.0	0.0
	2B	6.9	6.9
	3A	0.0	0.0
	3B	6.9	6.9
	4A	0.0	0.0
	4B	6.9	6.9
	5A	0.0	0.0
	5B	6.9	6.9
	6A	—	0.0
	6B	0.0	0.0
	7 AB	0.0	0.0
	8A	3.6	3.7
	8B	5.2	5.2
	9A	0.5	0.7
	9B	4.8	4.8
	10AB	—	0.0
	11AB	0.0	0.0
	12AB	0.0	0.0
	13AB	—	0.0
	14AB	0.0	0.0
	15AB	0.0	0.0
	16A	—	0.0
	16B	0.0	0.0
	17AB	0.0	0.0
	18AB	5.2	5.2
	19AB	0.0	0.0
	20AB	12.1	12.1
	21AB	5.3	5.3
	22AB	0.0	0.0
CN2	1 AB	0.0	0.0
	2A	11.3	11.2
	2B	0.0	0.0
	3A	0.0	0.0
	3B	1.8	1.8
	4 AB	0.0	0.0
	5A	0.0	0.5
	5B	0.0	0.0
	6A	12.9	12.9
	6B	0.0	0.2
	7 AB	0.0	0.0
	8 AB	0.0	0.0
	9 AB	0.0	0.0
	10AB	0.0	0.0
	11A	0.0	0.0
	11B	2.6	0.3
	12A	0.0	0.0
	12B	3.1	1.4
	13A	0.0	0.0
	13B	2.8	2.7
	14A	0.0	0.0
	14B	3.1	3.6
	15A	0.0	0.0
	15B	5.7	5.6
	16A	0.0	0.0
	16B	5.6	5.6
	17A	0.0	0.0
	17B	5.7	5.6
	18A	0.0	0.0
	18B	5.6	5.6
	19A	0.0	0.0
	19B	5.7	5.7
	20A	0.0	0.0
	20B	5.7	5.7
	21A	0.0	0.0
	21B	5.2	5.3
	22A	0.0	0.0
	22B	5.3	5.3

— DC Voltage (1/3) —

SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC1	1	0.1	0.1
	2	4.0	4.0
	3	0.1	0.1
	4	0.1	0.1
	5	0.4	0.4
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	4.5	4.5
	10	0.0	0.0
	11	4.5	4.5
	12	0.4	0.4
	13	0.1	0.1
	14	0.1	0.1
	15	4.0	4.0
	16	4.9	4.9
IC2	1	4.0	4.0
	2	0.4	0.4
	3	4.8	4.8
	4	0.1	0.1
	5	4.5	4.9
	6	0.0	0.0
	7	0.0	0.0
	8	0.4	0.4
	9	4.5	4.7
	10	4.5	4.7
	11	0.5	0.5
	12	0.1	0.1
	13	4.8	4.8
	14	4.9	4.9
IC3	1	4.8	4.8
	2	0.4	0.4
	3	3.2	3.2
	4	0.0	0.0
	5	3.2	3.2
	6	0.4	0.4
	7	4.8	4.8
	8	4.9	4.9
IC4	1	0.1	0.1
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	4.1	4.1
	6	0.0	0.0
	7	0.1	0.1
	8	4.9	4.9
IC5	1	—	0.0
	2	—	0.0
	3	—	0.2
	4	2.5	2.5
	5	2.7	2.7
	6	2.6	2.6
	7	0.0	0.0
	8	2.6	2.6
	9	2.5	2.5
	10	0.1	0.1
	11	0.0	0.0
	12	5.2	5.2
	13	4.9	4.9
	14	4.9	4.9
IC6	1	—	2.6
	2	2.6	2.6
	3	2.6	2.6
	4	2.6	2.6
	5	5.1	0.1
	6	0.0	4.9
	7	0.0	0.0
	8	0.0	0.0
	9	5.1	0.1
	10	2.6	2.6
	11	2.5	2.5
	12	0.0	4.9
	13	0.0	4.9
	14	5.1	5.1
IC7	1	2.5	2.5
	2	2.4	0.1
	3	2.4	2.6
	4	2.6	2.6
	5	0.0	0.0
	6	0.0	0.0
	7	0.0	0.0
	8	2.6	2.6
	9	2.4	2.6
	10	2.8	0.1
	11	2.6	2.6
	12	4.9	0.0
	13	4.9	0.0
	14	5.1	5.1
IC8	1	2.9	2.9
	2	2.6	2.6
	3	2.6	2.6
	4	0.0	0.0
	5	2.6	2.6
	6	2.6	2.6
	7	2.6	2.6
	8	5.1	5.1
IC9	1	2.5	2.5
	2	2.6	2.6
	3	2.6	2.6
	4	0.0	0.0
	5	2.4	2.4
	6	2.6	2.6
	7	0.1	0.1
	8	5.1	5.1
IC10	1	2.5	2.5
	2	2.5	2.5
	3	2.5	2.5
	4	0.0	0.0
	5	2.5	2.5
	6	2.5	2.5
	7	2.5	2.5
	8	5.0	5.0
IC11	1	2.6	2.6
	2	2.5	2.5
	3	2.5	2.5
	4	0.0	0.0
	5	2.5	2.5
	6	2.5	2.5
	7	2.7	2.7
	8	5.0	5.0
IC12	1	2.6	2.6
	2	2.6	2.6
	3	2.5	2.5
	4	0.0	0.0
	5	1.1	1.1
	6	1.1	1.1
	7	3.1	3.1
	8	19.0	19.0
IC13	1	4.9	4.9
	2	0.0	0.0
	3	0.1	0.1
	4	0.0	0.0
	5	2.5	2.5
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.0
	10	0.0	0.0
	11	0.0	0.0
	12	0.0	0.0
	13	4.9	4.9
	14	4.9	4.9
IC14	1	—	—
	2	—	—
	3	—	—
	4	—	—
	5	—	—
	6	—	—
	7	—	—
	8	—	—
	9	—	—
	10	—	—
	11	—	—
	12	—	—
	13	—	—
	14	—	—
	15	—	—
	16	—	—
	17	—	—
	18	—	—
	19	—	—
	20	—	—
	21	—	—
	22	—	—
	23	—	—
	24	—	—
	25	—	—
	26	—	—
	27	—	—
	28	—	—
	29	—	—
	30	—	—
	31	—	—
	32	—	—
	33	—	—
	34	—	—
	35	—	—
	36	—	—
	37	—	—
	38	—	—
	39	—	—
	40	—	—
	41	—	—
	42	—	—
	43	—	—
	44	—	—
	45	—	—
	46	—	—
	47	—	—
	48	—	—
	49	—	—
	50	—	—
	51	—	—
	52	—	—
	53	—	—
	54	—	—
	55	—	—
	56	—	—
	57	—	—
	58	—	—
	59	—	—
	60	—	—
	61	—	—
	62	—	—
	63	—	—
	64	—	—
	65	—	—
	66	—	—
	67	—	—
	68	—	—
	69	—	—
	70	—	—
	71	—	—
	72	—	—
	73	—	—
	74	—	—
	75	—	—
	76	—	—
	77	—	—
	78	—	—
	79	—	—
	80	—	—
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	91	—	—
	92	—	—
	93	—	—
	94	—	—
	95	—	—
	96	—	—
	97	—	—
	98	—	—
	99	—	—
	100	—	—
IC15	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	4.9	4.9
	6	4.9	4.9
	7	0.0	0.0
	8	4.9	4.9
IC16	1	0.0	0.0
	2	0.0	—
	3	0.1	—
	4	0.1	—
	5	0.1	—
	6	0.1	—
	7	0.1	—
	8	0.1	—
	9	0.1	—
	10	0.0	0.0
	11	0.0	0.5
	12	0.0	2.6
	13	0.0	2.5
	14	0.0	2.7
	15	0.0	2.6
	16	0.0	2.5
	17	0.0	2.5
	18	0.0	2.5
	19	0.0	2.4
	20	4.9	4.9
IC17	1	0.0	0.0
	2	0.0	3.8
	3	0.0	1.3
	4	0.0	2.7
	5	0.0	2.0
	6	0.0	1.8
	7	4.9	4.9
	8	0.0	0.0
	9	4.9	4.9
	10	4.9	4.9
	11	4.9	4.9
	12	4.9	4.4
	13	4.9	4.9
	14	4.9	4.9
	15	4.9	4.9
	16	4.9	4.9
IC18	1	0.0	1.8
	2	0.0	2.4
	3	0.0	2.6
	4	0.0	2.5
	5	0.0	2.7
	6	0.0	2.6
	7	0.0	2.4
	8	0.0	2.5
	9	0.0	2.5
	10	0.0	2.4
	11	0.1	1.8
	12	0.1	—
	13	0.1	0.7
	14	0.0	0.0
	15	0.0	2.3
	16	0.1	—
	17	0.1	2.6
	18	0.1	—
	19	0.1	1.7
	20	0.0	0.0
	21	0.0	2.7
	22	4.9	3.4
	23	0.0	3.1
	24	0.0	2.4
	25	4.8	2.2
	26	0.0	4.0
	27	0.0	1.4
	28	4.9	4.9
IC21	1	0.0	0.0
	2	4.9	4.9
	3	0.0	0.0
	4	0.0	2.5
	5	0.0	2.5
	6	4.9	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	4.9	4.9
	10	0.0	0.0
	11	4.8	4.8
	12	0.0	4.9
	13	0.0	4.9
	14	0.0	0.0
	15	4.9	4.9
	16	0.0	0.0
	17	0.0	0.0
	18	0.0	0.0
	19	0.0	0.0
	20	0.0	0.0
	21	4.9	4.9
	22	0.0	0.0
	23	4.9	4.9

— DC Voltage (2/3) —

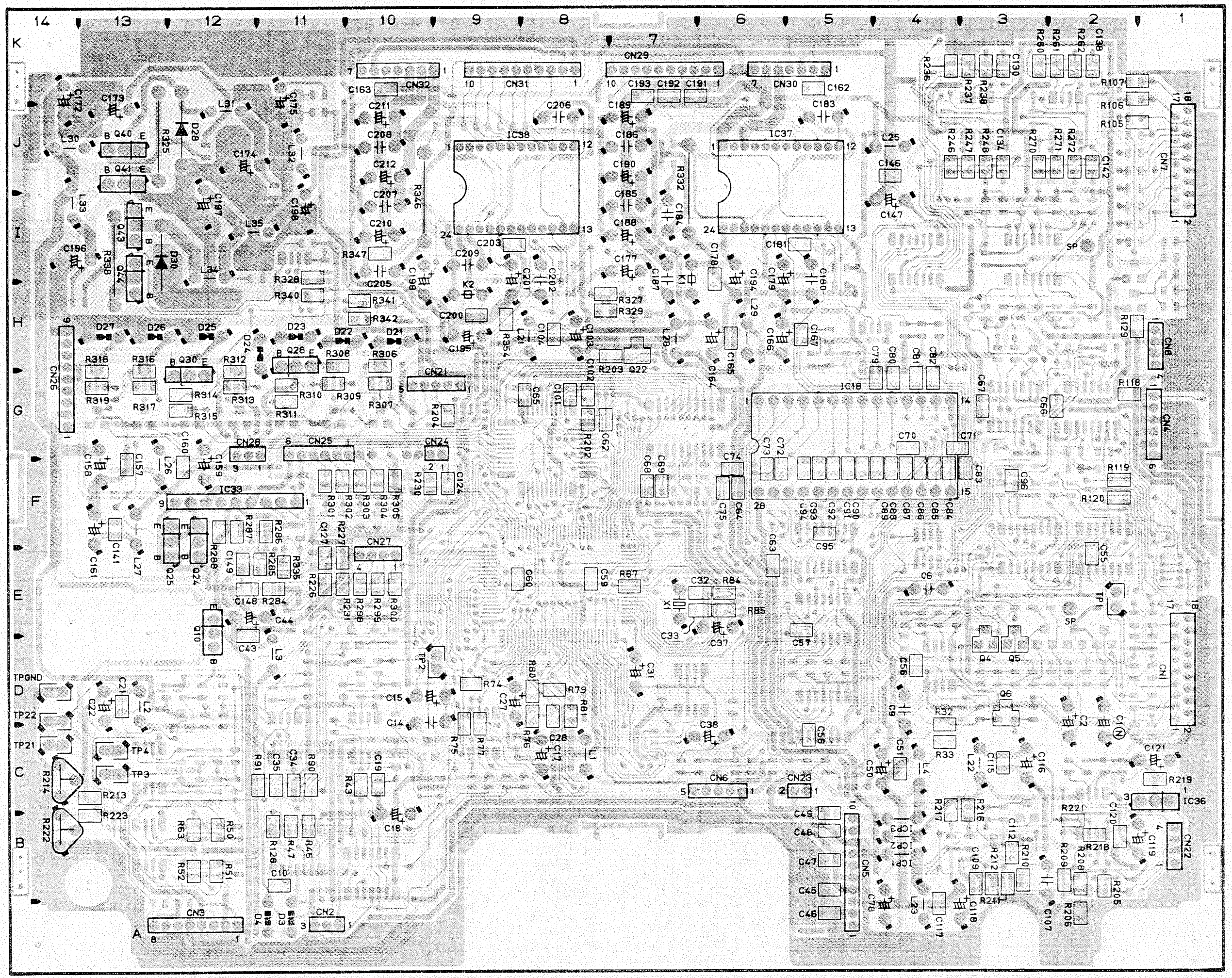
SYMBOL	No.	REC	PB
IC21	24	0.1	—
	25	0.1	—
	26	0.1	—
	27	0.1	—
	28	0.1	—
	29	0.1	—
	30	0.1	—
	31	0.1	—
	32	0.0	0.0
	33	0.0	0.0
	34	0.0	0.0
	35	4.9	4.9
	36	4.7	4.7
	37	4.8	4.8
	38	0.0	0.0
	39	4.8	4.8
	40	0.0	4.9
	41	4.8	4.8
	42	0.0	0.0
	43	4.8	4.8
	44	4.9	3.4
IC22	1	3.6	3.6
	2	4.2	4.2
	3	4.2	4.2
	4	12.3	-12.2
	5	4.0	4.0
	6	4.0	—
	7	4.3	4.3
	8	12.7	12.7
IC23	1	2.0	2.0
	2	0.3	0.3
	3	0.3	0.3
	4	12.3	-12.2
	5	2.0	2.0
	6	2.0	2.0
	7	0.3	0.3
	8	12.7	12.7
IC24	1	5.8	5.8
	2	2.5	2.5
	3	2.5	2.5
	4	0.0	0.0
	5	2.5	2.5
	6	2.5	2.5
	7	2.5	2.5
	8	12.7	12.7
IC25	1	—	—
	2	—	—
	3	5.0	5.0
	4	2.6	2.6
	5	2.5	2.5
	6	2.4	2.4
	7	2.5	2.5
	8	2.5	2.5
	9	2.5	2.5
	10	2.5	2.5
	11	2.5	2.5
	12	0.0	0.0
	13	2.5	2.5
	14	—	—
IC26	1	2.6	2.6
	2	2.5	2.5
	3	2.5	2.5
	4	0.0	0.0
	5	2.5	2.5
	6	2.5	2.5
	7	2.5	2.5
	8	5.0	5.0
IC28	1	2.5	2.5
	2	2.5	2.5
	3	2.5	2.5
	4	0.0	0.0
	5	2.5	2.5
	6	2.5	2.5
	7	2.5	2.5
	8	5.0	5.0
IC31	1	0.0	0.0
	2	0.0	0.0
	3	4.9	4.9
	4	0.0	0.0
	5	2.6	2.6
	6	2.3	2.3
	7	0.0	0.0
	8	0.0	0.0
	9	2.5	2.5
	10	2.5	2.5
	11	2.5	2.5
	12	2.5	2.5
	13	5.0	5.0
	14	4.9	4.9
IC32	1	0.1	0.1
	2	0.0	0.0
	3	0.0	0.0
	4	-12.3	-12.3
	5	2.6	2.6
	6	3.0	3.0
	7	-6.5	-6.5
	8	13.5	13.5
IC33	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.1
	5	0.0	0.0
	6	0.0	0.1
	7	0.0	0.1
	8	0.0	0.3
	9	13.5	13.5
IC34	1	0.1	0.1
	2	0.1	0.1
	3	0.1	0.1
	4	-12.3	-12.3
	5	0.2	0.2
	6	0.2	0.2
	7	0.2	0.2
	8	5.0	5.0
IC35	1	0.3	0.3
	2	2.7	2.7
	3	1.8	1.8
	4	0.0	0.0
	5	1.9	1.9
	6	2.7	2.7
	7	0.3	0.3
	8	5.0	5.0
IC36	1	2.5	2.5
	2	0.0	0.0
	3	10.9	10.9
IC37	1	—	—
	2	0.1	0.1
	3	—	—
	4	0.6	0.6
	5	2.3	2.3
	6	2.3	2.3
	7	2.3	2.3
	8	2.3	2.3
	9	2.3	2.3
	10	2.3	2.3
	11	—	—
	12	1.7	1.7
	13	5.0	5.0
	14	3.0	3.0
	15	0.0	0.0
	16	0.1	0.1
	17	1.2	1.2
	18	1.2	1.2
	19	0.0	0.0
	20	0.0	0.0
	21	0.6	0.6
	22	0.1	0.1
	23	—	—
	24	4.1	4.1
IC38	1	—	—
	2	0.2	0.2
	3	—	—
	4	1.8	1.8
	5	2.3	2.3
	6	2.4	2.4
	7	2.4	2.4
	8	2.4	2.4
	9	2.4	2.4
	10	2.4	2.4
	11	—	—
	12	1.7	1.7
	13	5.0	5.0
	14	3.0	3.0
	15	4.9	4.9
	16	0.2	0.2
	17	1.2	1.2
	18	1.2	1.2
	19	0.0	0.0
	20	0.0	0.0
	21	0.6	0.6
	22	0.2	0.2
	23	—	—
	24	4.4	5.4
IC39	1	0.0	0.0
	2	-6.5	-6.5
	3	0.0	0.0
	4	12.4	12.4
	5	13.5	13.5
TRANSISTOR			
Q1	B	2.4	2.4
	C	4.2	4.2
	E	1.8	1.8
Q2	B	4.2	4.2
	C	3.0	3.0
	E	4.8	4.8
Q3	B	3.3	3.3
	C	4.9	4.9
	E	2.8	2.8
Q4	B	.	.
	C	.	.
	E	.	.
Q5	B	.	.
	C	.	.
	E	.	.
Q6	B	.	.
	C	.	.
	E	.	.
Q7	B	4.8	4.8
	C	0.0	0.0
	E	0.0	0.0
Q8	B	3.8	3.8
	C	0.0	0.0
	E	2.2	2.0
Q9	B	3.2	2.7
	C	19.1	18.9
	E	2.6	2.2
Q10	B	2.5	2.1
	C	13.5	13.5
	E	2.0	1.6
Q11	B	0.0	0.0
	C	3.2	3.2
	E	0.0	0.0
Q12	B	4.9	4.9
	C	0.0	0.0
	E	4.9	4.9
Q22	B	.	.
	C	.	.
	E	.	.
Q23	B	0.0	0.0
	C	4.9	4.9
	E	0.0	0.0
Q24	B	0.1	0.1
	C	13.0	13.0
	E	0.2	0.2
Q25	B	13.0	13.0
	C	0.2	0.2
	E	13.5	13.5
Q26	B	12.8	12.8
	C	13.4	13.4
	E	13.5	13.5
Q27	B	18.9	18.9
	C	12.6	12.6
	E	18.9	18.9
Q30	B	18.8	18.8
	C	1.6	1.6
	E	18.9	18.9
Q31	B	18.2	18.2
	C	18.9	18.9
	E	18.9	18.9
Q32	B	18.9	18.9
	C	0.0	0.0
	E	18.9	18.9
Q33	B	4.9	4.9
	C	0.0	0.0
	E	0.0	0.0
Q34	B	0.0	0.0
	C	18.8	18.8
	E	0.0	0.0
Q37	B	0.0	0.0
	C	18.8	18.8
	E	0.0	0.0
Q38	B	4.9	4.9
	C	0.0	0.0
	E	0.0	0.0
Q39	B	0.0	0.0
	C	18.8	18.8
	E	0.0	0.0
Q40	B	18.8	18.8
	C	4.1	4.1
	E	18.8	18.8
Q41	B	0.3	0.3
	C	18.6	18.6
	E	0.0	0.0
Q42	B	4.1	4.1
	C	1.3	1.3
	E	5.0	5.0
Q43	B	18.8	18.8
	C	5.6	5.6
	E	18.9	18.9
Q44	B	0.4	0.4
	C	17.5	16.8
	E	0.0	0.0
Q45	B	5.8	5.2
	C	1.9	1.9
	E	5.0	5.0
CONNECTOR			
CN1	1	2.4	2.4
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	3.1	0.0
	6	0.0	0.0
	7	2.4	2.4
	8	0.0	0.0
	9	0.0	0.0
	10	0.0	0.0
	11	0.0	0.0
	12	0.0	0.0
	13	0.0	0.0
	14	0.0	0.0
	15	0.0	0.0
	16	0.0	0.0
	17	0.0	0.0
	18	0.0	0.0
CN2	1	—	2.6
	2	—	2.6
	3	0.0	0.0
CN3	1	2.5	2.5
	2	0.0	0.0
	3	2.5	2.5
	4	5.0	5.0
	5	13.5	13.5
	6	1.9	1.9
	7	4.9	4.9
	8	0.0	0.0

— DC Voltage (3/3) —

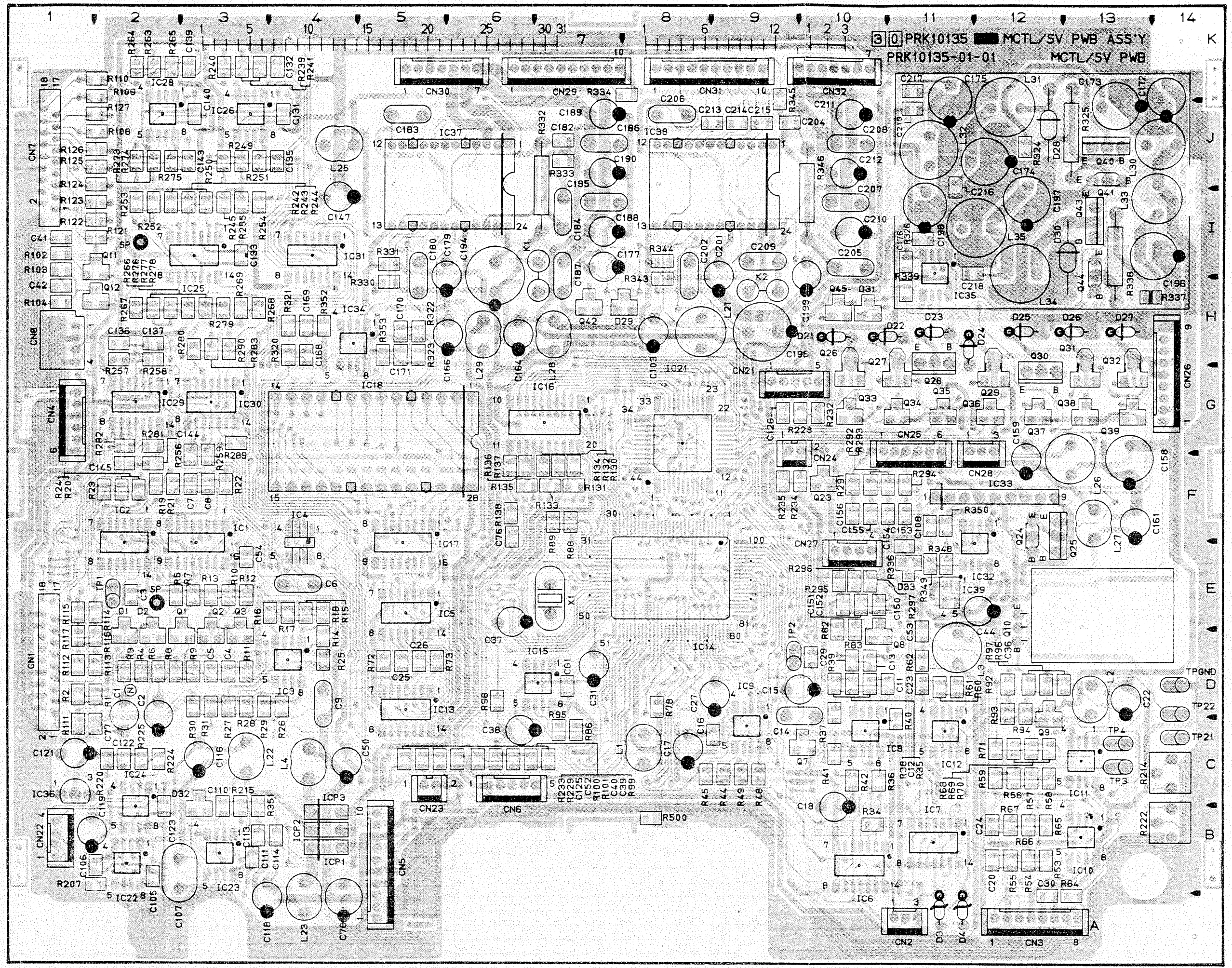
SYMBOL	No.	REC	PB
CN4	1	5.1	0.0
	2	2.4	2.4
	3	0.0	0.0
	4	4.9	4.9
	5	4.2	4.2
	6	0.0	0.0
CN5	1	19.0	19.0
	2	19.0	19.0
	3	13.5	13.5
	4	13.5	13.5
	5	0.0	0.0
	6	0.0	0.0
	7	12.3	12.3
	8	0.0	0.0
	9	12.9	12.9
	10	5.2	5.2
CN6	1	13.5	13.5
	2	0.0	0.0
	3	0.0	0.0
	4	2.7	2.7
	5	3.9	3.9
CN7	1	2.4	2.4
	2	0.0	0.0
	3	0.5	0.5
	4	0.0	0.0
	5	0.2	0.2
	6	0.0	0.0
	7	4.0	4.0
	8	0.0	0.0
	9	5.1	0.0
	10	0.0	0.0
	11	2.4	2.4
	12	2.4	2.4
	13	0.2	2.4
	14	—	0.9
	15	3.2	3.2
	16	5.2	5.2
	17	4.1	4.1
	18	5.0	5.0
CN21	1	12.8	12.8
	2	4.9	0.0
	3	0.0	0.0
	4	4.8	4.8
	5	0.0	0.0
CN22	1	4.2	4.2
	2	2.5	2.5
	3	4.0	4.0
	4	5.8	5.8
CN23	1	0.0	0.0
	2	0.0	0.0
CN24	1	0.0	0.0
	2	0.0	0.0
CN25	1	0.0	0.0
	2	0.0	4.9
	3	0.0	0.0
	4	0.0	4.8
	5	0.0	0.0
	6	0.0	0.0
CN26	1	0.3	0.3
	2	0.0	0.0
	3	0.2	—
	4	0.9	—
	5	0.0	0.0
	6	0.0	0.0
	7	1.6	1.6
	8	18.9	18.9
	9	0.0	0.0
CN27	1	0.0	0.0
	2	0.0	0.0
	3	4.8	4.8
	4	0.0	0.0
CN29	1	0.0	3.0
	2	1.7	1.7
	3	0.0	0.0
	4	0.0	0.0
	5	2.3	2.3
	6	2.3	2.3
	7	2.3	2.3
	8	2.3	2.3
	9	12.6	12.6
	10	0.0	0.0
CN30	1	5.0	5.0
	2	2.5	2.5
	3	0.0	0.0
	4	2.5	2.5
	5	—	—
	6	—	—
	7	—	—
CN31	1	4.9	4.9
	2	3.7	3.7
	3	3.0	3.0
	4	1.7	1.7
	5	0.0	0.0
	6	2.4	2.4
	7	2.4	2.4
	8	2.4	2.4
	9	2.4	2.4
	10	2.4	2.4
CN32	1	—	—
	2	—	—
	3	—	—
	4	5.0	5.0
	5	2.5	2.5
	6	0.0	0.0
	7	2.5	2.5

4.33 M-CTL/SERVO CIRCUIT BOARD

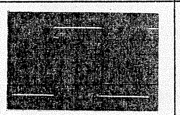
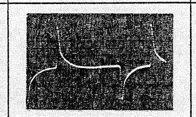
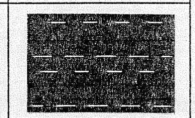
— SOLDER Side —



— PARTS Side —

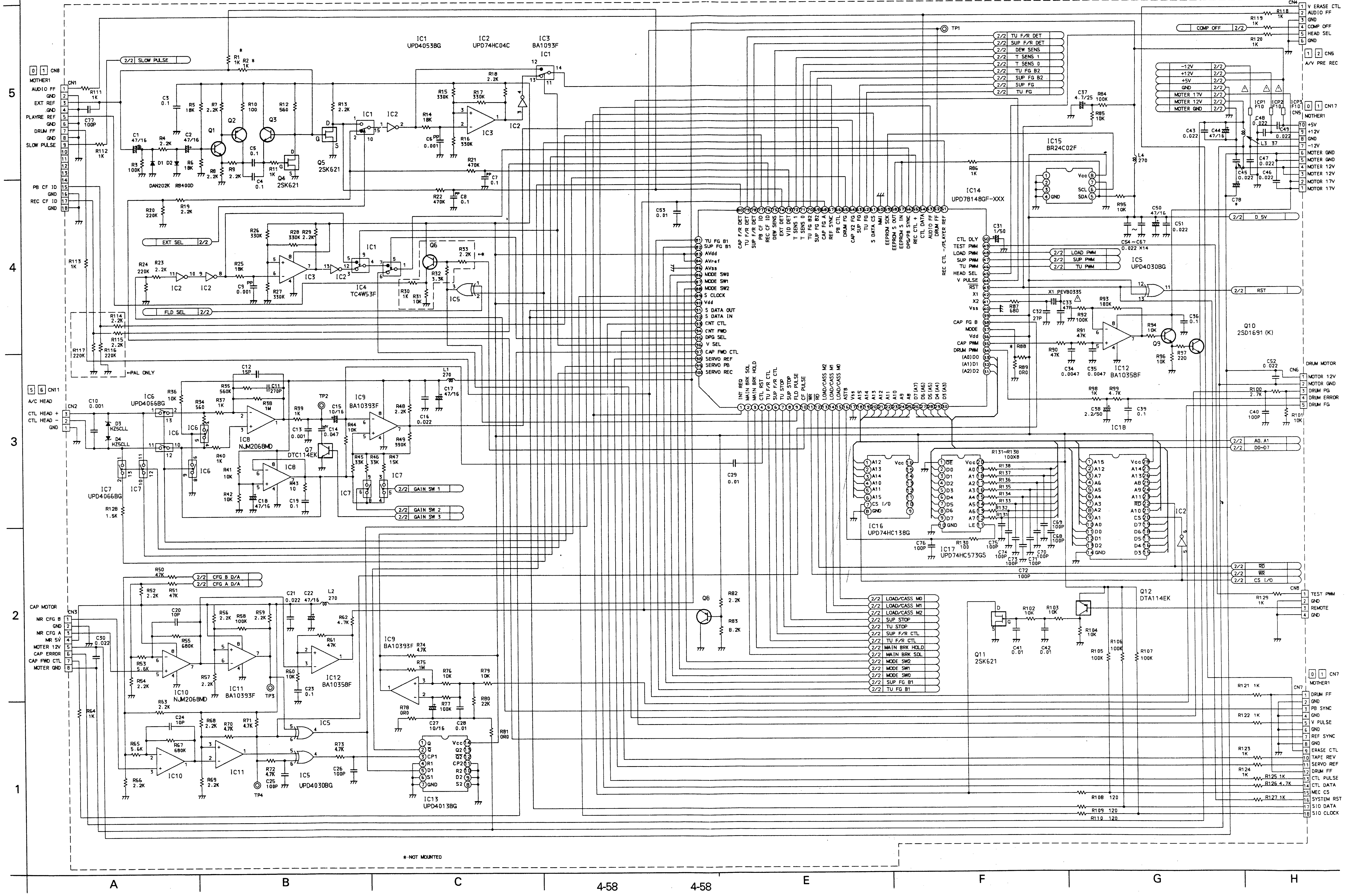

PRK10135 MCTL/SV PWB ASS'Y
PRK10135-01-01 MCTL/SV PWB

— MAIN WAVEFORMS OF M-CTL/R-SERVO CIRCUIT —

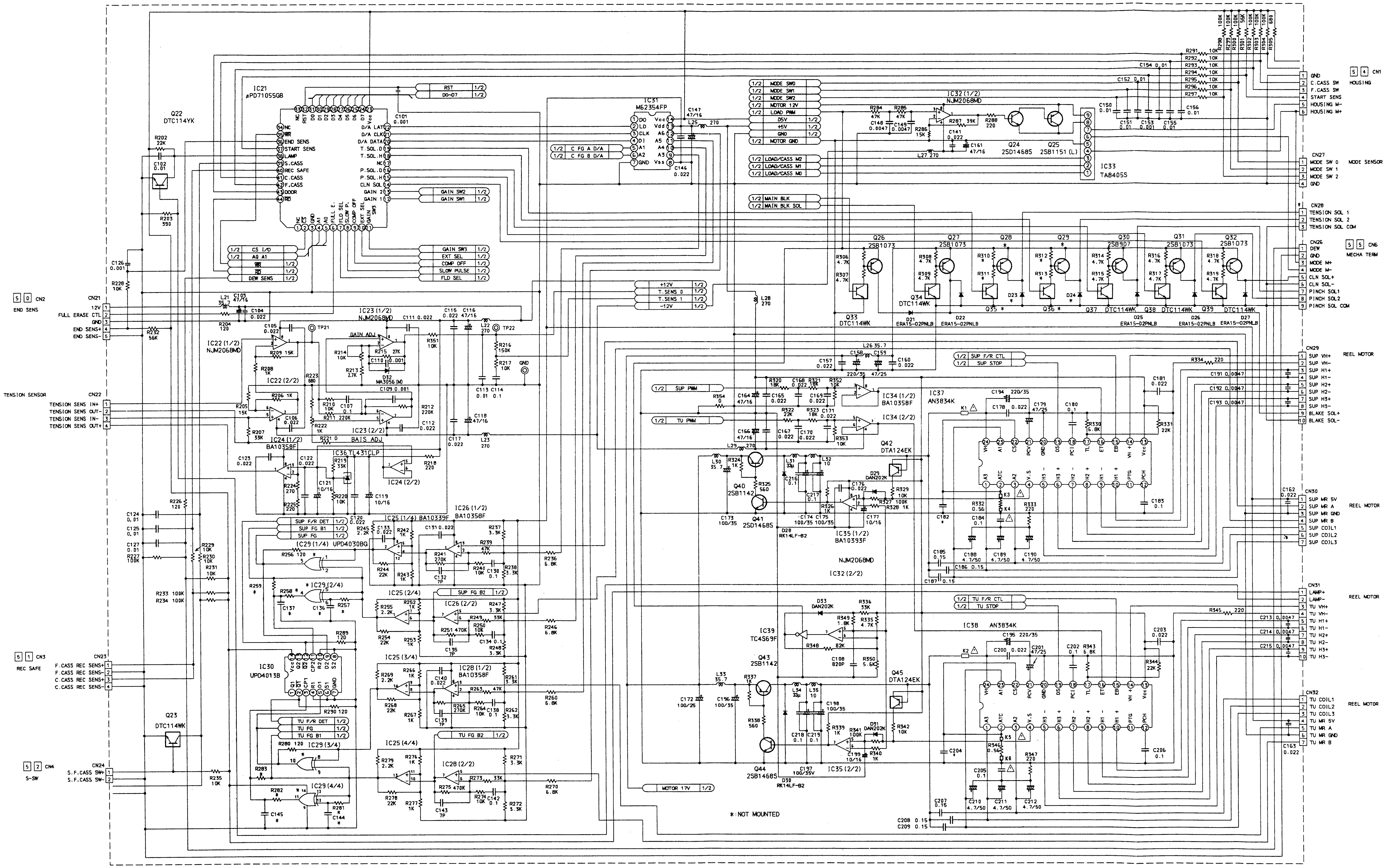
TP1	TP2	TP3 & TP4
		
4.9 Vp-p (30 HZ)	[PB] 2.1 Vp-p (30 Hz)	UPPER : TP4 LOWER : TP3

4.34 M-CTL/SERVO SCHEMATIC DIAGRAM

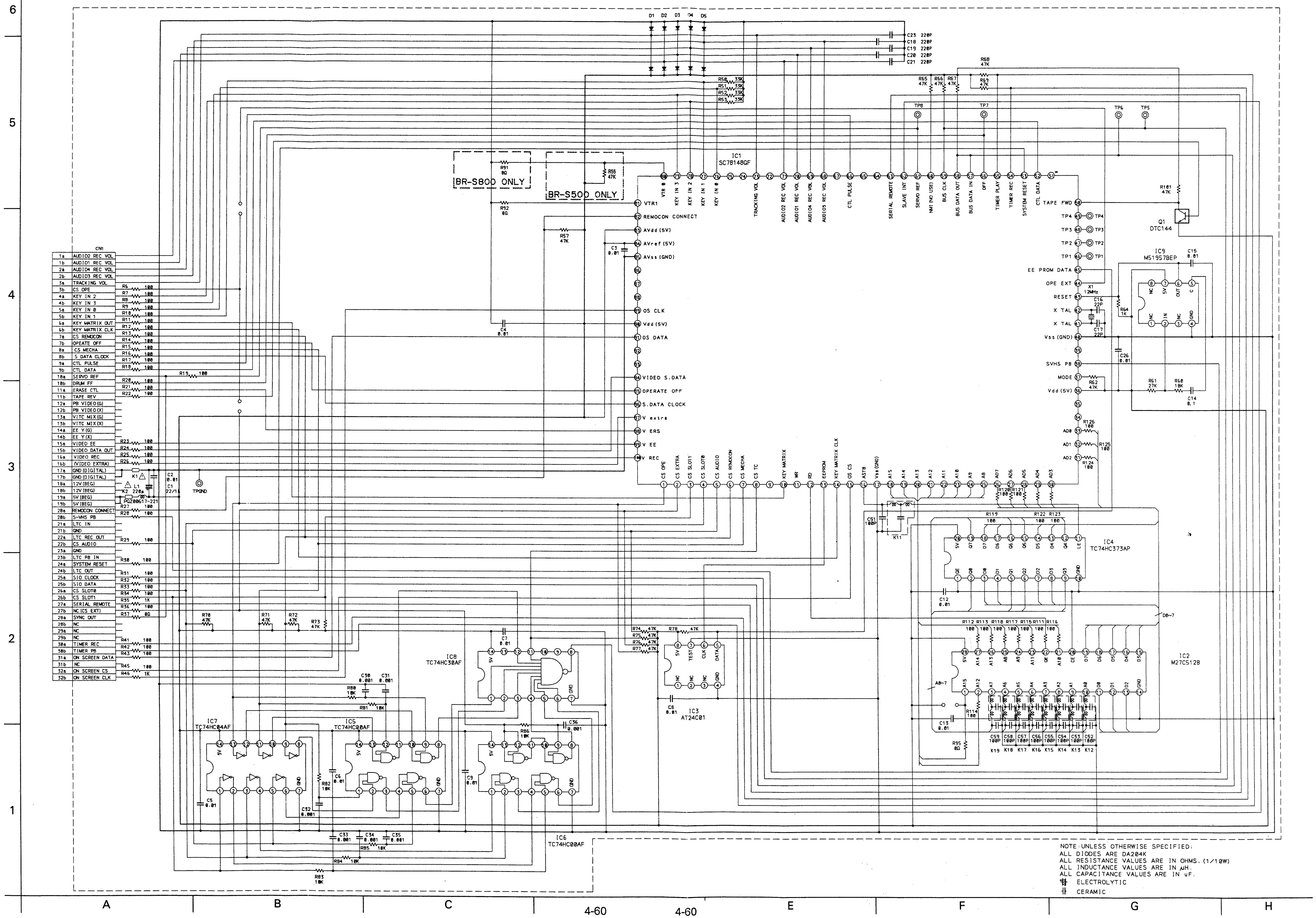
— DIAGRAM (1/2) —


IC1 UPD4053BG
IC2 UPD74HC04C
IC3 BA1093F
IC4 TC4W53F
IC5 UPD4030BG
IC6 UPD4066BG
IC7 UPD4066BG
IC8 NJM2068MD
IC9 BA10393F
IC10 NJM2068MD
IC11 BA10393F
IC12 BA10358F
IC13 UPD4013BG
IC14 UPD78148GF-XXX
IC15 BR24C02F
IC16 UPD74HC138G
IC17 UPD74HC573GS
IC18
Q1
Q2
Q3
Q4 2SK621
Q5 2SK621
Q6
Q7 DTC114EK
Q8
Q9
Q10 2SD1691 (K)
Q11 2SK621
Q12 DTA114EK
X1 PEVB0335
TP1
TP2
TP3
TP4
CN1 MOTHER1
AUDIO FF
GND
EXT REF
GND
PLAYRE REF
GND
DRUM FF
GND
SLOW PULSE
PB CF ID
GND
REC CF ID
GND
CN2 A/C HEAD
CTL HEAD +
CTL HEAD −
GND
CN3 CAP MOTOR
NR CFG B
GND
NR CFG A
NR 5V
MOTER 12V
CAP ERROR
CAP FWD CTL
MOTER GND
CN4
V ERASE CTL
AUDIO FF
GND
COMP OFF
HEAD SEL
GND
CN5 A/V PRE REC
CN17 MOTHER1
+5V
+12V
GND
−12V
MOTER GND
MOTER GND
MOTER 12V
MOTER 12V
MOTOR 17V
MOTOR 17V
CN6 DRUM MOTOR
MOTOR 12V
MOTOR GND
DRUM PG
DRUM ERROR
DRUM FG
CN8
TEST PWM
GND
REMOTE
GND
CN7 MOTHER1
DRUM FF
GND
PB SYNC
GND
V PULSE
GND
REF SYNC
GND
ERASE CTL
TAPE REV
SERVO REF
DRUM FF
CTL PULSE
CTL DATA
MEC CS
SYSTEM RST
SIO DATA
SIO CLOCK
2/2 SLOW PULSE
2/2 EXT SEL
2/2 FLD SEL
2/2 GAIN SW 1
2/2 GAIN SW 2
2/2 GAIN SW 3
2/2 CFG B D/A
2/2 CFG A D/A
2/2 TU F/R DET
2/2 SUP F/R DET
2/2 DEW SENS
2/2 T SENS 1
2/2 T SENS 0
2/2 TU FG B2
2/2 SUP FG B2
2/2 SUP FG
2/2 TU FG
2/2 COMP OFF
2/2 −12V
2/2 +12V
2/2 +5V
2/2 GND
2/2 MOTER 17V
2/2 MOTER 12V
2/2 MOTER GND
2/2 D 5V
2/2 LOAD PWM
2/2 SUP PWM
2/2 TU PWM
2/2 RST
2/2 A0, A1
2/2 D0-D7
2/2 RD
2/2 WR
2/2 CS I/O
2/2 LOAD/CASS M0
2/2 LOAD/CASS M1
2/2 LOAD/CASS M2
2/2 SUP STOP
2/2 TU STOP
2/2 SUP F/R CTL
2/2 TU F/R CTL
2/2 MAIN BRK HOLD
2/2 MAIN BRK SOL
2/2 MODE SW2
2/2 MODE SW1
2/2 MODE SW0
2/2 SUP FG B1
2/2 TU FG B1
→PAL ONLY
DAN202K RB400D
*-NOT MOUNTED

— DIAGRAM (2/2) —


IC21
μPD71055GB
Q22
DTC114YK
IC31
M62354FP
IC32 (1/2)
NJM2068MD
Q24
2SD1468S
Q25
2SB1151 (L)
IC33
TA8405S
5 4 CN1
HOUSING
GND
C.CASS SW
F.CASS SW
START SENS
HOUSING M-
HOUSING M+
CN27
MODE SW 0
MODE SW 1
MODE SW 2
GND
MODE SENSOR
CN28
TENSION SOL 1
TENSION SOL 2
TENSION SOL COM
CN26
5 5 CN6
MECHA TERM
DEW
GND
MODE M+
MODE M-
CLN SOL+
CLN SOL-
PINCH SOL1
PINCH SOL2
PINCH SOL COM
Q26
2SB1073
Q27
2SB1073
Q28
Q29
Q30
2SB907
Q31
2SB1073
Q32
2SB1073
Q33
DTC114WK
Q34
DTC114WK
Q35
Q36
Q37 DTC114WK
Q38 DTC114WK
Q39 DTC114WK
D21 ERA15-02PNLB
D22 ERA15-02PNLB
D25 ERA15-02PNLB
D26 ERA15-02PNLB
D27 ERA15-02PNLB
5 0 CN2
END SENS
CN21
12V
FULL ERASE CTL
GND
END SENS+
END SENS-
IC22 (1/2)
NJM2068MD
IC22 (2/2)
IC23 (1/2)
NJM2068MD
IC23 (2/2)
GAIN ADJ
BAIS ADJ
IC24 (1/2)
BA10358F
IC24 (2/2)
IC36 TL431CLP
TP21
TP22
GND
TENSION SENSOR
CN22
TENSION SENS IN+
TENSION SENS OUT-
TENSION SENS IN-
TENSION SENS OUT+
+12V
T.SENS 0
T.SENS 1
-12V
SUP PWM
TU PWM
IC34 (1/2)
BA10358F
IC34 (2/2)
Q40
2SB1142
Q41
2SD1468S
Q42
DTA124EK
IC35 (1/2)
BA10393F
NJM2068MD
IC32 (2/2)
IC37
AN3834K
SUP F/R CTL
SUP STOP
CN29
REEL MOTOR
SUP VH+
SUP VH-
SUP H1+
SUP H1-
SUP H2+
SUP H2-
SUP H3+
SUP H3-
BLAKE SOL+
BLAKE SOL-
CN30
SUP MR 5V
SUP MR A
SUP MR GND
SUP MR B
SUP COIL1
SUP COIL2
SUP COIL3
CN31
LAMP+
LAMP-
TU VH+
TU VH-
TU H1+
TU H1-
TU H2+
TU H2-
TU H3+
TU H3-
CN32
TU COIL1
TU COIL2
TU COIL3
TU MR 5V
TU MR A
TU MR GND
TU MR B
TU F/R CTL
TU STOP
IC38 AN3834K
IC39
TC4S69F
Q43
2SB1142
Q44
2SB1468S
Q45
DTA124EK
IC35 (2/2)
D28 RK14LF-B2
D30 RK14LF-B2
D33 DAN202K
MOTOR 17V
*:NOT MOUNTED
SUP F/R DET
SUP FG B1
SUP FG
IC25 (1/4) BA10339F
IC26 (1/2) BA10358F
IC29 (1/4) UPD4030BG
IC29 (2/4)
IC25 (2/4)
IC26 (2/2)
SUP FG B2
IC25 (3/4)
IC28 (1/2) BA10358F
IC25 (4/4)
IC28 (2/2)
TU F/R DET
TU FG
TU FG B1
TU FG B2
IC29 (3/4)
IC29 (4/4)
IC30
UPD4013B
5 1 CN3
REC SAFE
CN23
F.CASS REC SENS+
F.CASS REC SENS-
C.CASS REC SENS+
C.CASS REC SENS-
Q23
DTC114WK
5 2 CN4
S-SW
CN24
S.F.CASS SW+
S.F.CASS SW-
RST
D0-D7
CS I/O
A0 A1
DEW SENS
GAIN SW3
EXT SEL
COMP OFF
SLOW PULSE
FLD SEL
GAIN SW2
GAIN SW1
C FG A D/A
C FG B D/A
MODE SW0
MODE SW1
MODE SW2
MOTOR 12V
LOAD PWM
D5V
+5V
GND
MOTOR GND
LOAD/CASS M2
LOAD/CASS M1
LOAD/CASS M0
MAIN BLK
MAIN BLK SOL
6
5
4
3
2
1
A
B
C
E
F
G
H

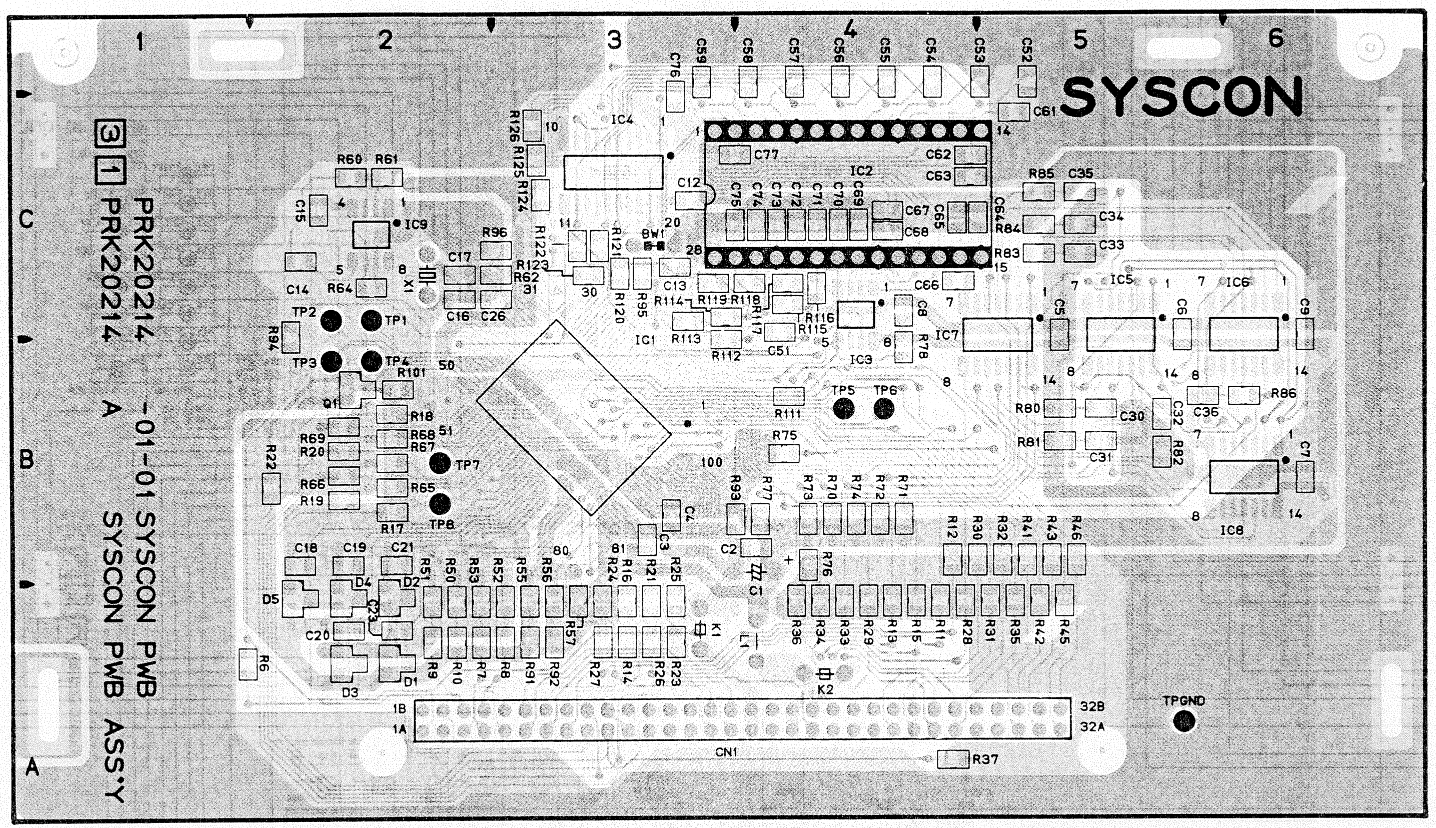
4.35 SYSCON SCHEMATIC DIAGRAM


CN1
IC1 SC78148QF
IC2 M27C512B
IC3 AT24C01
IC4 TC74HC373AP
IC5 TC74HC00AF
IC6 TC74HC00AF
IC7 TC74HC04AF
IC8 TC74HC30AF
IC9 M51957BEP
Q1 DTC144
X1 12MHz
BR-S800 ONLY
BR-S500 ONLY
D1 D2 D3 D4 D5
TP5 TP6 TP7 TP8
TPGND
A B C D E F G H
1 2 3 4 5 6

NOTE UNLESS OTHERWISE SPECIFIED.
ALL DIODES ARE DA204K
ALL RESISTANCE VALUES ARE IN OHMS. (1/10W)
ALL INDUCTANCE VALUES ARE IN μH.
ALL CAPACITANCE VALUES ARE IN uF.
ELECTROLYTIC
CERAMIC

4.36 SYSCON CIRCUIT BOARD

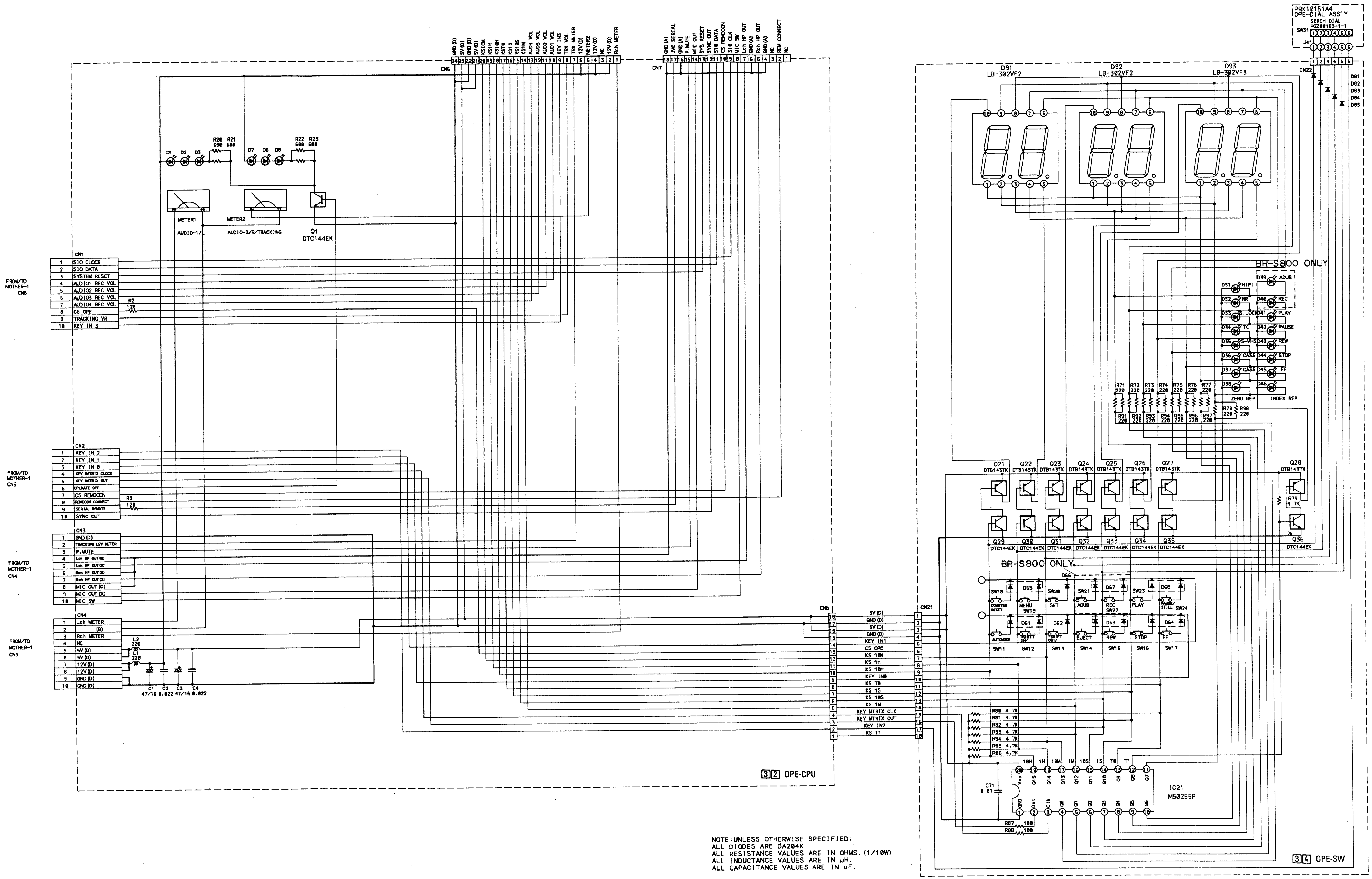
— SOLDER Side —


SYSCON
1
2
3
4
5
6
A
B
C
31
PRK20214 A -01-01 SYSCON PWB
PRK20214 SYSCON PWB ASS'Y
IC1
IC2
IC3
IC4
IC5
IC6
IC7
IC8
IC9
Q1
X1
SW1
K1
K2
L1
D1
D2
D3
D4
D5
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TPGND
CN1
1A
1B
32A
32B
C1
C2
C3
C4
C5
C6
C7
C8
C9
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C23
C26
C30
C31
C32
C33
C34
C35
C36
C51
C52
C53
C54
C55
C56
C57
C58
C59
C61
C62
C63
C64
C65
C66
C67
C68
C69
C70
C71
C72
C73
C74
C75
C76
C77
R6
R7
R8
R9
R10
R12
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
R28
R29
R30
R31
R32
R33
R34
R35
R36
R37
R41
R42
R43
R45
R46
R50
R51
R52
R53
R55
R56
R57
R60
R61
R62
R64
R65
R66
R67
R68
R69
R70
R71
R72
R73
R74
R75
R76
R77
R78
R80
R81
R82
R83
R84
R85
R86
R91
R92
R93
R94
R95
R96
R101
R111
R112
R113
R114
R115
R116
R117
R118
R119
R120
R121
R122
R123
R124
R125
R126

— DC Voltage —

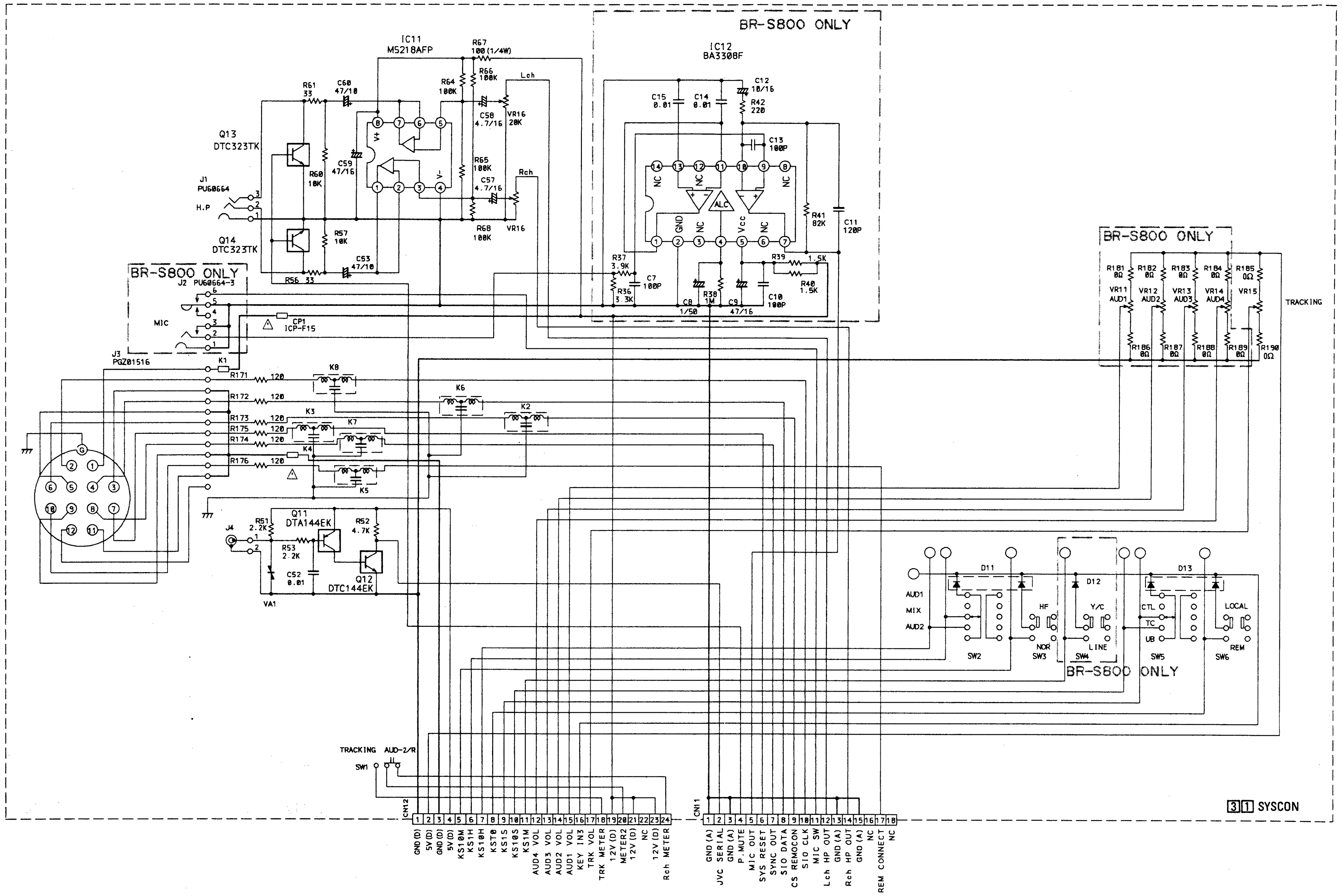
SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC2	1	2.3	2.3
	2	2.2	2.2
	3	2.7	2.7
	4	1.2	1.2
	5	2.7	2.7
	6	2.7	2.7
	7	2.4	2.4
	8	2.8	2.8
	9	2.6	2.6
	10	2.5	2.5
	11	2.1	2.1
	12	2.2	2.2
	13	2.3	2.3
	14	0.0	0.0
	15	2.2	2.2
	16	2.0	2.0
	17	2.5	2.5
	18	1.6	1.6
	19	2.1	2.1
	20	0.0	0.0
	21	1.9	1.9
	22	3.5	3.5
	23	3.5	3.5
	24	2.6	2.6
	25	3.0	3.0
	26	3.4	3.4
	27	3.3	3.3
	28	5.2	5.2
IC3	1	0.1	0.1
	2	0.1	0.1
	3	0.1	0.1
	4	0.0	0.0
	5	0.0	0.0
	6	5.2	5.2
	7	0.0	0.0
	8	5.2	5.2
IC4	1	0.0	0.0
	2	2.5	2.5
	3	2.1	2.1
	4	2.1	2.1
	5	2.6	2.6
	6	2.8	2.8
	7	2.3	2.3
	8	2.2	2.2
	9	2.6	2.6
	10	0.0	0.0
	11	0.4	0.4
	12	2.7	2.7
	13	2.0	2.0
	14	2.5	2.5
	15	2.9	2.9
	16	1.6	1.6
	17	1.6	1.6
	18	2.2	2.2
	19	2.2	2.2
	20	0.0	0.0
IC5	1	5.2	5.2
	2	0.0	0.0
	3	5.2	5.2
	4	2.7	2.7
	5	2.5	2.5
	6	5.2	5.2
	7	0.0	0.0
	8	5.2	5.2
	9	5.2	5.2
	10	0.0	0.0
	11	5.2	5.2
	12	3.2	3.2
	13	2.0	2.0
	14	5.2	5.2
IC6	1	0.0	0.0
	2	5.2	5.2
	3	5.2	5.2
	4	0.0	0.0
	5	5.2	5.2
	6	5.2	5.2
	7	0.0	0.0
	8	5.2	5.2
	9	5.2	5.2
	10	0.0	0.0
	11	0.0	0.0
	12	5.2	5.2
	13	5.2	5.2
	14	5.2	5.2
IC7	1	5.2	5.2
	2	0.0	0.0
	3	5.2	5.2
	4	0.0	0.0
	5	2.4	2.4
	6	2.7	2.7
	7	0.0	0.0
	8	0.0	0.0
	9	5.2	5.2
	10	2.0	2.0
	11	3.2	3.2
	12	0.0	0.0
	13	5.2	5.2
	14	5.2	5.2
IC8	1	5.2	5.2
	2	5.2	5.2
	3	5.2	5.2
	4	5.2	5.2
	5	5.2	5.2
	6	5.2	5.2
	7	0.0	0.0
	8	0.0	0.0
	9	0.0	0.0
	10	0.0	0.0
	11	5.2	5.2
	12	5.2	5.2
	13	0.0	0.0
	14	0.0	0.0
IC9	1	0.0	0.0
	2	—	—
	3	0.0	0.0
	4	0.0	0.0
	5	—	—
	6	5.2	5.2
	7	5.2	5.2
	8	0.0	0.0
TRANSISTOR			
Q1	B	0.0	0.0
	C	5.2	5.2
	E	0.0	0.0
CONNECTOR			
CN1	1A	2.6	2.6
	1B	2.5	2.5
	2A	2.6	2.6
	2B	2.6	2.6
	3A	2.6	2.6
	3B	0.0	0.0
	4A	1.2	1.2
	4B	0.7	0.7
	5A	0.0	0.0
	5B	0.0	0.0
	6A	0.1	0.1
	6B	0.7	0.7
	7A	5.2	5.2
	7B	5.1	5.1
	8A	3.2	3.2
	8B	0.0	0.0
	9A	0.2	0.2
	9B	—	—
	10A	2.4	2.4
	10B	2.4	2.4
	11A	5.1	5.1
	11B	0.0	0.0
	12A	0.0	0.0
	12B	0.0	0.0
	13A	0.0	0.0
	13B	0.0	0.0
	14A	0.0	0.0
	14B	0.0	0.0
	15A	5.1	5.1
	15B	0.0	0.0
	16A	5.1	5.1
	16B	5.2	5.2
	17A	0.0	0.0
	17B	0.0	0.0
	18A	12.9	12.9
	18B	12.9	12.9
	19A	5.2	5.2
	19B	5.2	5.2
	20A	5.2	5.2
	20B	4.1	4.1
	21A	0.0	0.0
	21B	0.0	0.0
	22A	0.0	0.0
	22B	2.4	2.4
	23A	0.0	0.0
	23B	0.0	0.0
	24A	5.2	5.2
	24B	5.3	5.3
	25A	5.0	5.0
	25B	4.2	4.2
	26A	5.2	5.2
	26B	5.2	5.2
	27A	5.1	5.1
	27B	5.2	5.2
	28A	2.4	2.4
	28B	0.0	0.0
	29A	0.0	0.0
	29B	0.0	0.0
	30A	5.2	5.2
	30B	5.2	5.2
	31A	0.6	0.6
	31B	0.0	0.0
	32A	—	—
	32B	4.8	4.8

4.37 OPERATION SCHEMATIC DIAGRAM
— OPE-CPU, OPE-SW, OPE-DIAL —


CN6
GND (D)
5V (D)
GND (D)
5V (D)
KS10M
KS1H
KS10H
KST0
KS1S
KS10S
KS1M
AUD4 VOL
AUD3 VOL
AUD2 VOL
AUD1 VOL
KEY IN3
TRK VOL
TRK METER
12V (D)
METER2
12V (D)
NC
12V (D)
Rch METER
CN7
GND (A)
JVC SERIAL
GND (A)
P.MUTE
MIC OUT
SYS RESET
SYNC OUT
S10 DATA
CS REMOCON
S10 CLK
MIC SW
Lch HP OUT
GND (A)
Rch HP OUT
GND (A)
NC
REM CONNECT
NC
D1 D2 D3
R20 R21 680 680
D7 D6 D8
R22 R23 680 680
METER1
AUDIO-1/L
METER2
AUDIO-2/R/TRACKING
Q1
DTC144EK
FROM/TO MOTHER-1 CN6
CN1
1 SIO CLOCK
2 SIO DATA
3 SYSTEM RESET
4 AUDIO1 REC VOL
5 AUDIO2 REC VOL
6 AUDIO3 REC VOL
7 AUDIO4 REC VOL
8 CS OPE
9 TRACKING VR
10 KEY IN 3
R2 120
FROM/TO MOTHER-1 CN5
CN2
1 KEY IN 2
2 KEY IN 1
3 KEY IN 0
4 KEY MATRIX CLOCK
5 KEY MATRIX OUT
6 OPERATE OFF
7 CS REMOCON
8 REMOCON CONNECT
9 SERIAL REMOTE
10 SYNC OUT
R3 120
FROM/TO MOTHER-1 CN4
CN3
1 GND (D)
2 TRACKING LEV METER
3 P.MUTE
4 Lch HP OUT (G)
5 Lch HP OUT (X)
6 Rch HP OUT (G)
7 Rch HP OUT (X)
8 MIC OUT (G)
9 MIC OUT (X)
10 MIC SW
FROM/TO MOTHER-1 CN3
CN4
1 Lch METER
2 (G)
3 Rch METER
4 NC
5 5V (D)
6 5V (D)
7 12V (D)
8 12V (D)
9 GND (D)
10 GND (D)
L2 220
L1 220
C1 47/16
C2 0.022
C3 47/16
C4 0.022
CN5
CN21
5V (D)
GND (D)
5V (D)
GND (D)
KEY IN1
CS OPE
KS 10M
KS 1H
KS 10H
KEY IN0
KS T0
KS 1S
KS 10S
KS 1M
KEY MTRIX CLK
KEY MTRIX OUT
KEY IN2
KS T1
3 2 OPE-CPU
PRK10151A4
OPE-DIAL ASS'Y
SERCH DIAL
PGZ00153-1-1
SW31
J41
CN22
D81 D82 D83 D84 D85
D91 LB-302VF2
D92 LB-302VF2
D93 LB-302VF3
BR-S800 ONLY
D39 ADUB
D51 HIFI
D32 NR
D40 REC
D33 S.LOCK
D41 PLAY
D34 TC
D42 PAUSE
D35 S-VHS
D43 REW
D36 CASS
D44 STOP
D37 CASS
D45 FF
D38
D46
ZERO REP
INDEX REP
R71 220
R72 220
R73 220
R74 220
R75 220
R76 220
R77 220
R78 220
R98 220
R91 220
R92 220
R93 220
R94 220
R95 220
R96 220
R97 220
Q21 DTB143TK
Q22 DTB143TK
Q23 DTB143TK
Q24 DTB143TK
Q25 DTB143TK
Q26 DTB143TK
Q27 DTB143TK
Q28 DTB143TK
R79 4.7K
Q29 DTC144EK
Q30 DTC144EK
Q31 DTC144EK
Q32 DTC144EK
Q33 DTC144EK
Q34 DTC144EK
Q35 DTC144EK
Q36 DTC144EK
BR-S800 ONLY
D66
SW18 COUNTER RESET
D65
MENU SW19
SW20 SET
SW21 ADUB
D67
REC SW22
SW23 PLAY
D68
PAUSE/STILL SW24
AUTOMODE
D61
+SHIFT IN/
D62
-SHIFT OUT/
EJECT
D63
REW
STOP
D64
FF
SW11 SW12 SW13 SW14 SW15 SW16 SW17
R80 4.7K
R81 4.7K
R82 4.7K
R83 4.7K
R84 4.7K
R85 4.7K
R86 4.7K
10H 1H 10M 1M 10S 1S T0 T1
Vcc Q15 Q14 Q13 Q12 Q11 Q10 Q9 Q8 Q7
GND Dat Clk Q0 Q1 Q2 Q3 Q4 Q5 Q6
C71 0.01
IC21
M50255P
R87 100
R88 100
3 4 OPE-SW

NOTE: UNLESS OTHERWISE SPECIFIED;
ALL DIODES ARE DA204K
ALL RESISTANCE VALUES ARE IN OHMS. (1/10W)
ALL INDUCTANCE VALUES ARE IN µH.
ALL CAPACITANCE VALUES ARE IN uF.

— OPE-VR —


BR-S800 ONLY
IC11
M5218AFP
R67
100 (1/4W)
R66
100K
R64
100K
Lch
R61
33
C60
47/10
C58
4.7/16
VR16
20K
Q13
DTC323TK
C59
47/16
R60
10K
R65
100K
C57
4.7/16
Rch
J1
PU60664
H.P
R68
100K
VR16
R57
10K
Q14
DTC323TK
C53
47/10
R56 33
J2 PU60664-3
MIC
CP1
ICP-F15
J3
PGZ01516
K1
R171 120
K8
R172 120
K6
K2
R173 120
R175 120
R174 120
K3
K7
K4
R176 120
K5
G
Q11
DTA144EK
J4
R51
2.2K
R52
4.7K
R53
2.2K
C52
0.01
Q12
DTC144EK
VA1
IC12
BA3308F
C12
10/16
C15
0.01
C14
0.01
R42
220
C13
100P
NC
GND
Vcc
ALC
R41
82K
C11
120P
R37
3.9K
R36
3.3K
C7
100P
R39
1.5K
R40
1.5K
C8
1/50
R38
1M
C9
47/16
C10
100P
R181 0Ω
R182 0Ω
R183 0Ω
R184 0Ω
R185 0Ω
VR11 AUD1
VR12 AUD2
VR13 AUD3
VR14 AUD4
VR15
TRACKING
R186 0Ω
R187 0Ω
R188 0Ω
R189 0Ω
R190 0Ω
D11
D12
D13
AUD1
MIX
AUD2
SW2
HF
NOR
SW3
Y/C
LINE
SW4
CTL
TC
UB
SW5
LOCAL
REM
SW6
TRACKING AUD-2/R
SW1
CN12
1 GND (D)
2 5V (D)
3 GND (D)
4 5V (D)
5 KS10M
6 KS1H
7 KS10H
8 KST0
9 KS1S
10 KS10S
11 KS1M
12 AUD4 VOL
13 AUD3 VOL
14 AUD2 VOL
15 AUD1 VOL
16 KEY IN3
17 TRK VOL
18 TRK METER
19 12V (D)
20 METER2
21 12V (D)
22 NC
23 12V (D)
24 Rch METER
CN11
1 GND (A)
2 JVC SERIAL
3 GND (A)
4 P.MUTE
5 MIC OUT
6 SYS RESET
7 SYNC OUT
8 SIO DATA
9 CS REMOCON
10 SIO CLK
11 MIC SW
12 Lch HP OUT
13 GND (A)
14 Rch HP OUT
15 GND (A)
16 NC
17 REM CONNECT
18 NC
3 1 SYSCON

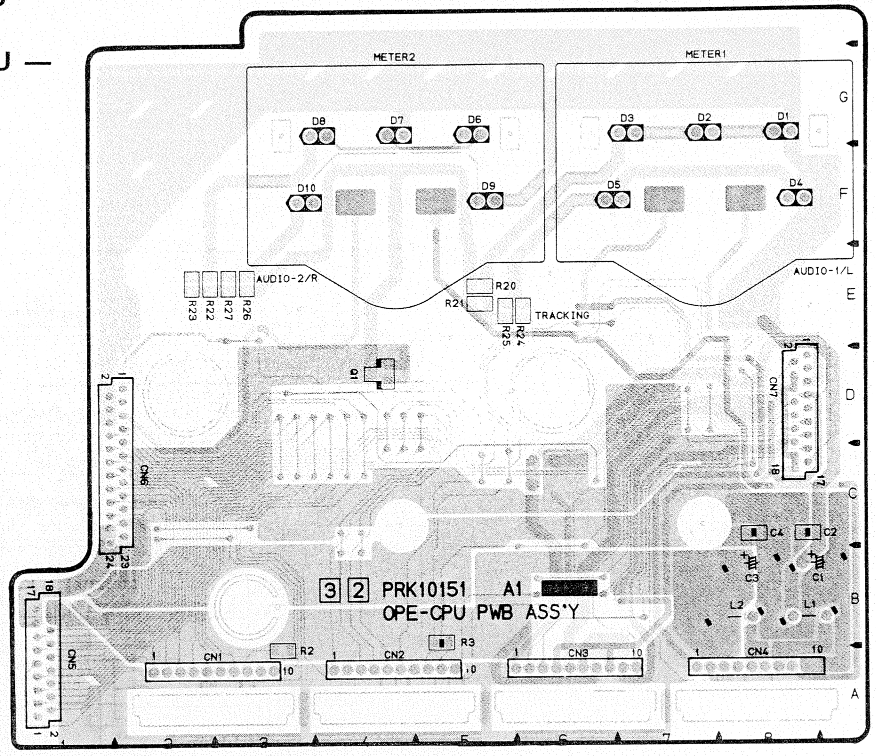
6
5
4
3
2
1

— DC Voltage —

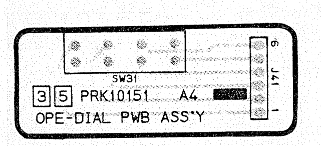
SYMBOL	No.	REC	PB
INTEGRATED CIRCUIT			
IC11	1	6.3	6.3
	2	6.3	6.3
	3	6.2	6.3
	4	0.0	0.0
	5	6.2	6.2
	6	6.2	6.3
	7	6.2	6.3
	8	12.5	12.5
IC12	1	1.5	1.5
	2	0.0	0.0
	3	0.0	0.0
	4	0.0	0.0
	5	9.2	9.3
	6	0.0	0.0
	7	1.9	1.8
	8	0.0	0.0
	9	0.0	0.0
	10	1.8	1.8
	11	1.5	1.5
	12	0.0	0.0
	13	0.0	0.0
	14	0.0	0.0
IC21	1	0.0	0.0
	2	0.1	0.1
	3	0.7	0.7
	4	—	—
	5	—	—
	6	—	—
	7	—	—
	8	—	—
	9	—	—
	10	—	—
	11	2.2	2.5
	12	0.6	0.6
	13	0.5	0.5
	14	0.5	0.5
	15	0.5	0.5
	16	0.5	0.5
	17	0.5	0.5
	18	0.5	0.5
	19	0.5	0.5
	20	5.1	5.2
TRANSISTOR			
Q1	B	.	.
	C	.	.
	E	.	.
Q11	B	5.1	5.2
	C	0.0	0.0
	E	5.2	5.2
Q12	B	0.0	0.0
	C	5.1	5.2
	E	0.0	0.0
Q13	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q14	B	0.0	0.0
	C	0.0	0.0
	E	0.0	0.0
Q21	B	4.1	4.1
	C	3.5	3.6
	E	5.1	5.2
Q22	B	4.1	4.1
	C	3.8	3.5
	E	5.2	5.2
Q23	B	4.1	4.1
	C	3.7	3.0
	E	5.2	5.2
Q24	B	4.1	4.1
	C	3.5	3.3
	E	5.2	5.2
Q25	B	4.1	4.1
	C	3.3	3.3
	E	5.2	5.2
Q26	B	4.1	4.1
	C	3.1	3.1
	E	5.2	5.2
Q27	B	4.1	4.1
	C	3.6	3.2
	E	5.2	5.2
Q28	B	4.1	4.1
	C	3.4	3.0
	E	5.2	5.2
Q29	B	0.5	0.5
	C	4.1	4.1
	E	0.0	0.0
Q30	B	0.5	0.5
	C	4.1	4.1
	E	0.0	0.0
Q31	B	0.4	0.5
	C	4.1	4.1
	E	0.0	0.0
Q32	B	0.5	0.5
	C	4.1	4.1
	E	0.0	0.0
Q33	B	0.5	0.5
	C	4.1	4.1
	E	0.0	0.0
Q34	B	0.5	0.5
	C	4.1	4.1
	E	0.0	0.0
Q35	B	0.5	0.5
	C	4.1	4.1
	E	0.0	0.0
Q36	B	0.6	0.6
	C	4.1	4.1
	E	0.0	0.0
CONNECTOR			
CN1	1	5.0	5.0
	2	4.3	4.1
	3	5.2	5.2
	4	2.3	2.3
	5	2.6	2.6
	6	2.3	2.3
	7	1.3	1.3
	8	0.0	0.0
	9	3.7	3.5
	10	1.2	1.2
CN2	1	0.8	1.2
	2	0.0	0.0
	3	0.0	0.0
	4	0.7	0.7
	5	0.1	0.1
	6	5.1	5.1
	7	5.2	5.2
	8	5.2	5.2
	9	5.2	0.0
	10	2.4	2.5
CN3	1	0.0	0.0
	2	0.0	0.9
	3	0.0	0.0
	4	0.0	0.0
	5	0.0	0.0
	6	0.0	0.0
	7	0.0	0.0
	8	0.0	0.0
	9	1.9	1.8
	10	11.3	11.3
CN4	1	0.0	0.0
	2	0.0	0.0
	3	0.0	0.0
	4	5.3	5.3
	5	5.2	5.2
	6	5.2	5.2
	7	12.9	12.9
	8	12.9	12.9
	9	0.0	0.0
	10	0.0	0.0
CN5	1	0.0	0.0
	2	0.8	1.1
	3	0.1	0.1
	4	0.7	0.8
	5	0.5	0.5
	6	0.5	0.5
	7	0.5	0.5
	8	0.0	0.5
	9	0.5	0.0
	10	0.5	0.5
	11	0.5	0.5
	12	0.5	0.5
	13	0.0	0.0
	14	0.0	0.0
	15	0.0	0.0
	16	5.1	5.2
	17	0.0	0.0
	18	5.2	5.2
IC6	1	0.0	0.0
	2	12.8	12.9
	3	0.0	0.0
	4	12.8	12.9
	5	0.0	0.0
	6	12.8	12.9
	7	0.0	0.8
	8	3.5	3.5
	9	1.2	1.2
	10	2.3	2.3
	11	2.6	2.6
	12	2.3	2.3
	13	1.3	1.3
	14	0.5	0.5
	15	0.5	0.5
	16	0.5	0.5
	17	0.5	0.5
	18	0.5	0.5
	19	0.5	0.5
	20	0.5	0.5
	21	5.2	5.2
	22	0.0	0.0
	23	5.2	5.2
	24	0.0	0.0
CN7	1	0.0	0.0
	2	5.2	5.2
	3	0.0	0.0
	4	0.0	0.0
	5	0.0	0.0
	6	0.0	0.0
	7	0.0	0.0
	8	11.3	11.3
	9	5.0	5.0
	10	5.2	5.2
	11	4.2	4.2
	12	2.4	2.5
	13	5.2	5.2
	14	1.8	1.8
	15	0.0	0.0
	16	0.0	0.0
	17	5.1	5.2
	18	0.0	0.0
IC11	1	0.0	0.0
	2	5.1	5.2
	3	0.0	0.0
	4	0.0	0.0
	5	1.8	1.8
	6	5.2	5.2
	7	2.4	2.5
	8	4.2	4.2
	9	5.2	5.2
	10	5.0	5.0
	11	11.3	11.3
	12	0.0	0.0
	13	0.0	0.0
	14	0.0	0.0
	15	0.0	0.0
	16	0.0	0.0
	17	5.2	5.2
	18	0.0	0.0
CN12	1	0.0	0.0
	2	5.2	5.2
	3	0.0	0.0
	4	5.2	5.2
	5	0.5	0.5
	6	0.5	0.5
	7	0.5	0.5
	8	0.5	0.5
	9	0.5	0.5
	10	0.5	0.5
	11	0.5	0.5
	12	1.3	1.3
	13	2.3	2.3
	14	2.6	2.6
	15	2.3	2.3
	16	1.2	1.2
	17	3.5	3.5
	18	0.0	0.8
	19	12.8	12.9
	20	0.0	0.0
	21	12.8	12.9
	22	0.0	0.0
	23	12.8	12.9
	24	0.0	0.0
CN21	1	5.2	5.2
	2	0.0	0.0
	3	5.1	5.2
	4	0.0	0.0
	5	0.0	0.0
	6	0.0	0.0
	7	0.5	0.5
	8	0.5	0.5
	9	0.5	0.5
	10	0.0	0.0
	11	0.5	0.5
	12	0.5	0.5
	13	0.5	0.5
	14	0.5	0.5
	15	0.7	0.8
	16	0.1	0.1
	17	0.8	1.1
	18	0.0	0.0
CN22	1	0.8	1.1
	2	1.8	1.1
	3	0.8	1.8
	4	1.8	2.2
	5	2.0	1.2
	6	0.8	1.1

4.38 OPERATION CIRCUIT BOARD

— OPE-CPU —

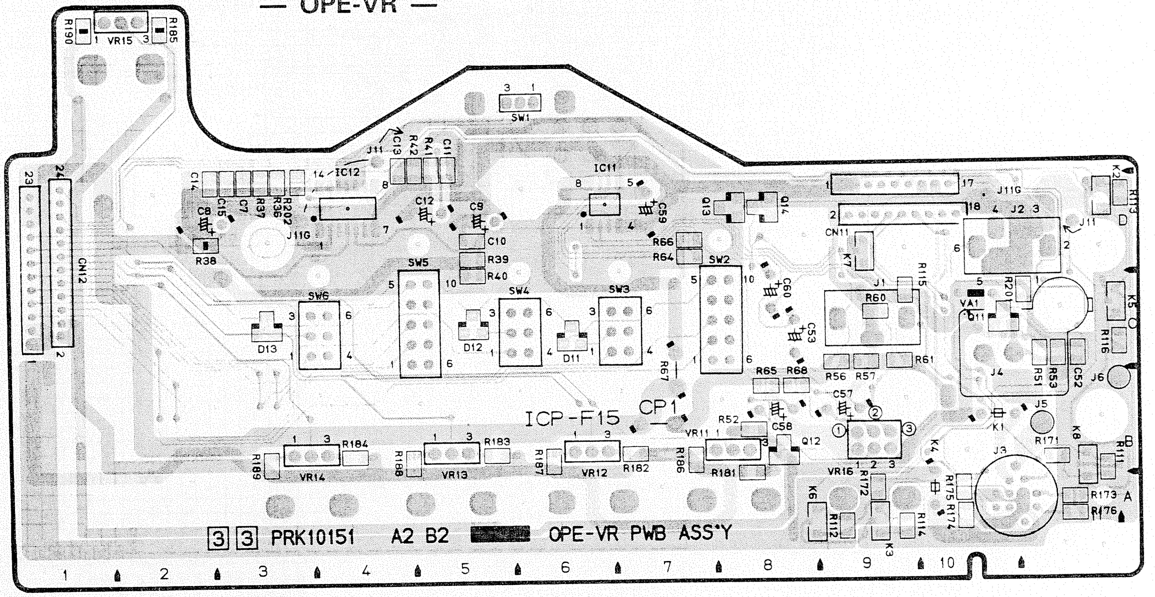

METER2
METER1
D8
D7
D6
D3
D2
D1
D10
D9
D5
D4
AUDIO-2/R
AUDIO-1/L
TRACKING
R20
R21
CN7
CN6
CN5
CN1
CN2
CN3
CN4
R2
R3
C4
C2
C3
C1
L2
L1
3 2 PRK10151 A1
OPE-CPU PWB ASS'Y

— OPE-DIAL —

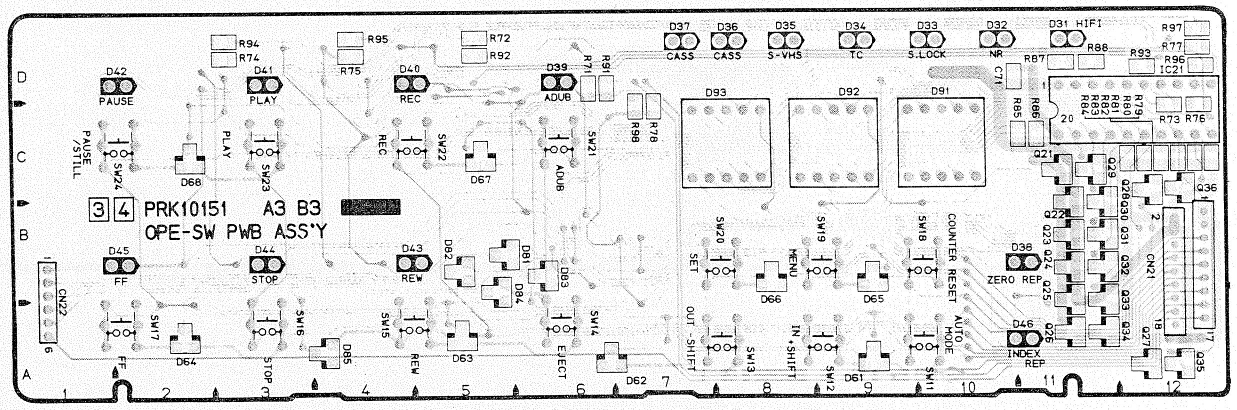

SW31
J41
3 5 PRK10151 A4
OPE-DIAL PWB ASS'Y

PRK10151 -01-02 OPERATION PWB
PRK10151 A B ■ OPERATION PWB ASS'Y

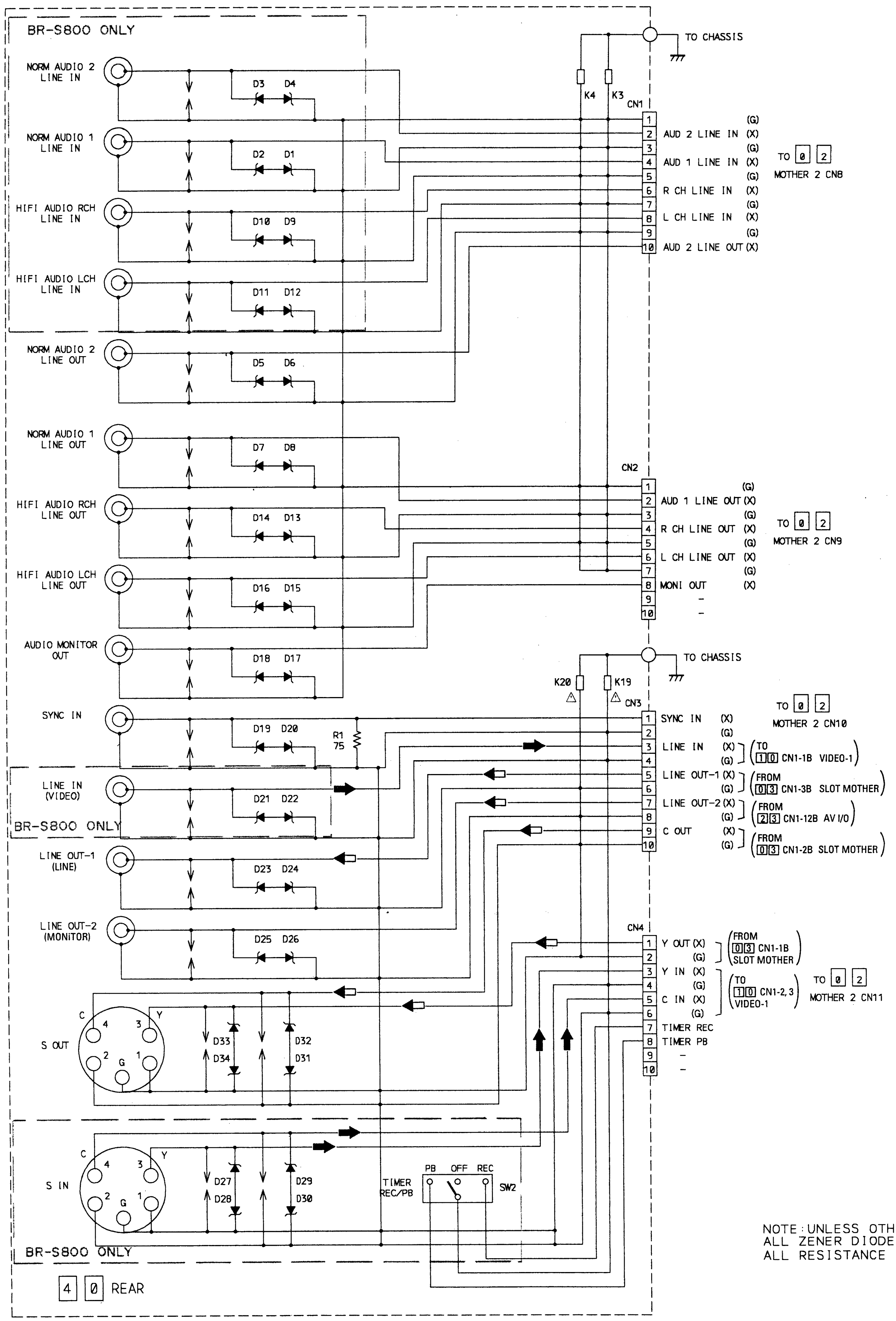
— OPE-VR —


VR15
R190
R185
SW1
IC12
IC11
J11G
SW5
SW6
SW4
SW3
SW2
CN12
CN11
D13
D12
D11
ICP-F15
CP1
VR14
VR13
VR12
VR11
VR16
J1
J3
J4
J5
J6
K1
3 3 PRK10151 A2 B2
OPE-VR PWB ASS'Y

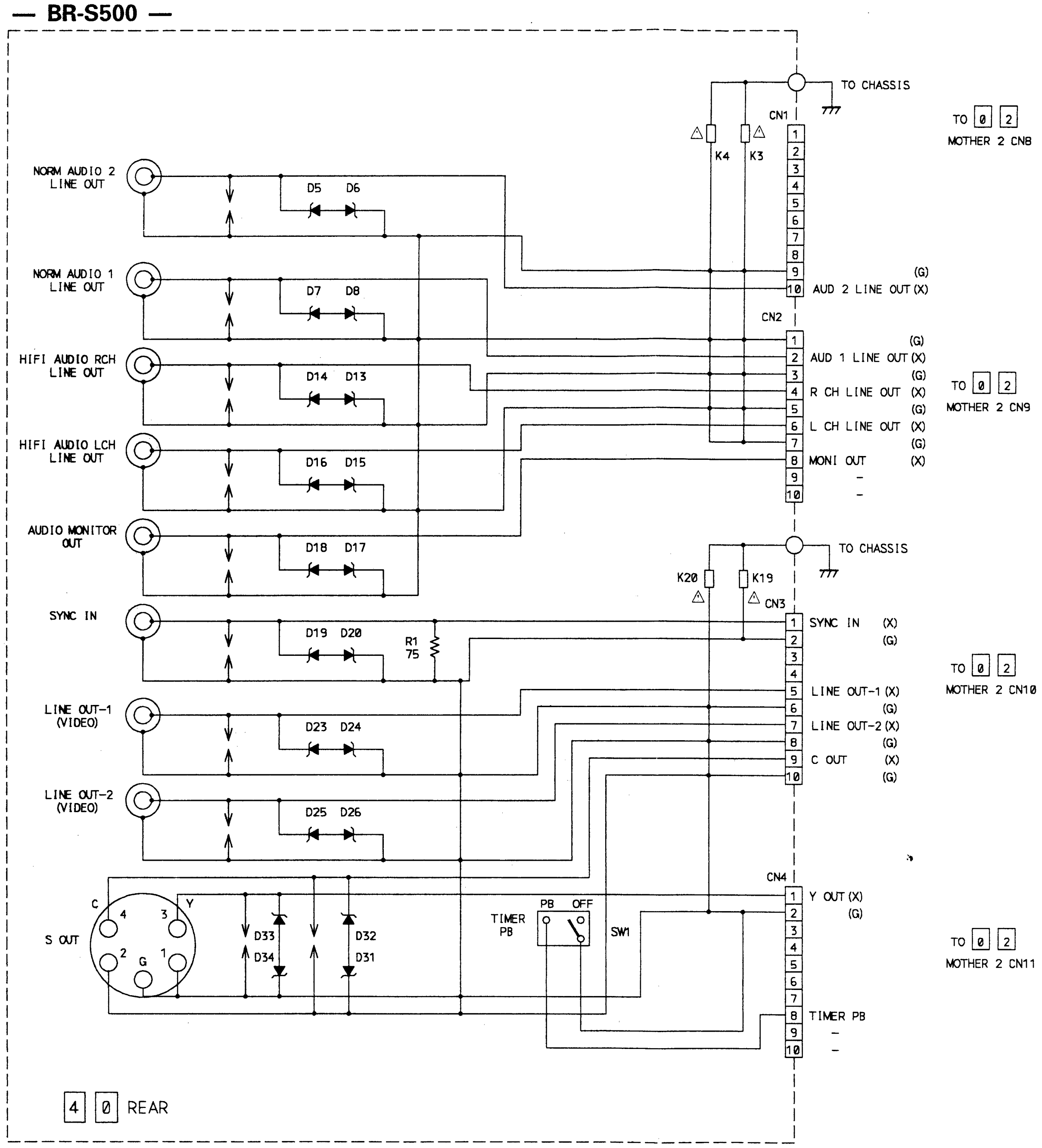
— OPE-SW —


D42 PAUSE
D41 PLAY
D40 REC
D39 ADUB
D37 CASS
D36 CASS
D35 S-VHS
D34 TC
D33 S.LOCK
D32 NR
D31 HIFI
D93
D92
D91
PAUSE /STILL
PLAY
REC
ADUB
3 4 PRK10151 A3 B3
OPE-SW PWB ASS'Y
D45 FF
D44 STOP
D43 REW
SET
MENU
COUNTER RESET
D38 ZERO REP
D46 INDEX REP
FF
STOP
REW
EJECT
OUT SHIFT
IN SHIFT
AUTO MODE
CN21
CN22
IC21

4.39 REAR SCHEMATIC DIAGRAM



— BR-S800 —
BR-S800 ONLY
NORM AUDIO 2 LINE IN
NORM AUDIO 1 LINE IN
HIFI AUDIO RCH LINE IN
HIFI AUDIO LCH LINE IN
NORM AUDIO 2 LINE OUT
NORM AUDIO 1 LINE OUT
HIFI AUDIO RCH LINE OUT
HIFI AUDIO LCH LINE OUT
AUDIO MONITOR OUT
SYNC IN
LINE IN (VIDEO)
LINE OUT-1 (LINE)
LINE OUT-2 (MONITOR)
S OUT
S IN
D3 D4 D2 D1 D10 D9 D11 D12 D5 D6 D7 D8 D14 D13 D16 D15 D18 D17 D19 D20 D21 D22 D23 D24 D25 D26
D33 D34 D32 D31 D27 D28 D29 D30
R1 75
K4 K3 K20 K19
TO CHASSIS
CN1
AUD 2 LINE IN (X)
AUD 1 LINE IN (X)
R CH LINE IN (X)
L CH LINE IN (X)
AUD 2 LINE OUT (X)
(G)
TO 0 2 MOTHER 2 CN8
CN2
AUD 1 LINE OUT (X)
R CH LINE OUT (X)
L CH LINE OUT (X)
MONI OUT (X)
TO 0 2 MOTHER 2 CN9
CN3
SYNC IN (X)
LINE IN (X)
LINE OUT-1 (X)
LINE OUT-2 (X)
C OUT (X)
TO 0 2 MOTHER 2 CN10
(TO 10 CN1-1B VIDEO-1)
(FROM 03 CN1-3B SLOT MOTHER)
(FROM 23 CN1-12B AV I/O)
(FROM 03 CN1-2B SLOT MOTHER)
CN4
Y OUT (X)
Y IN (X)
C IN (X)
TIMER REC
TIMER PB
(FROM 03 CN1-1B SLOT MOTHER)
(TO 10 CN1-2,3 VIDEO-1)
TO 0 2 MOTHER 2 CN11
TIMER REC/PB
PB OFF REC
SW2
C Y G 1 2 3 4
4 0 REAR



— BR-S500 —
NORM AUDIO 2 LINE OUT
NORM AUDIO 1 LINE OUT
HIFI AUDIO RCH LINE OUT
HIFI AUDIO LCH LINE OUT
AUDIO MONITOR OUT
SYNC IN
LINE OUT-1 (VIDEO)
LINE OUT-2 (VIDEO)
S OUT
D5 D6 D7 D8 D14 D13 D16 D15 D18 D17 D19 D20 D23 D24 D25 D26
D33 D34 D32 D31
R1 75
K4 K3 K20 K19
TO CHASSIS
CN1
AUD 2 LINE OUT (X)
TO 0 2 MOTHER 2 CN8
CN2
AUD 1 LINE OUT (X)
R CH LINE OUT (X)
L CH LINE OUT (X)
MONI OUT (X)
TO 0 2 MOTHER 2 CN9
CN3
SYNC IN (X)
LINE OUT-1 (X)
LINE OUT-2 (X)
C OUT (X)
TO 0 2 MOTHER 2 CN10
CN4
Y OUT (X)
TIMER PB
TO 0 2 MOTHER 2 CN11
TIMER PB
PB OFF
SW1
C Y G 1 2 3 4
4 0 REAR

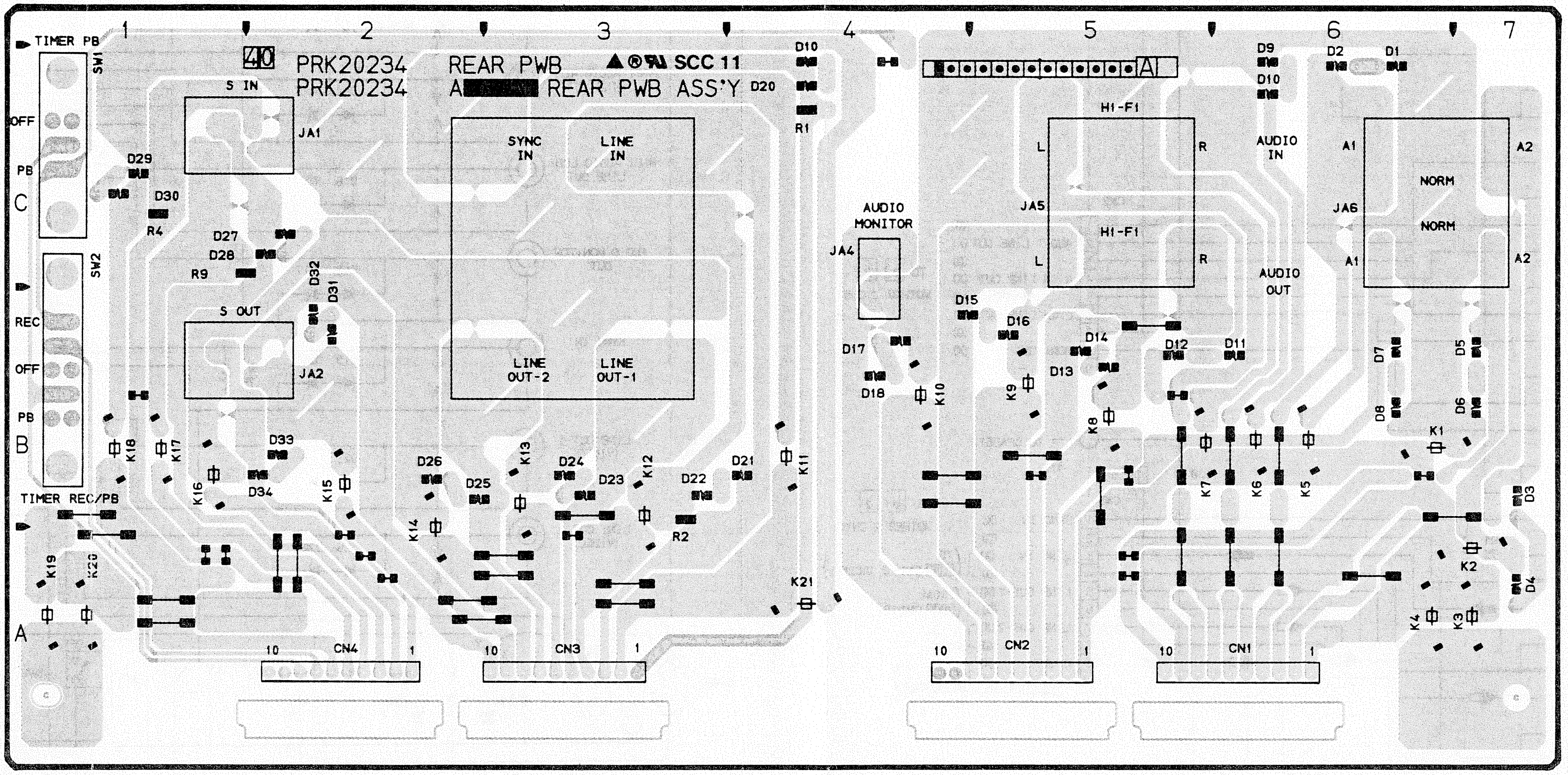
NOTE: UNLESS OTHERWISE SPECIFIED,
ALL ZENER DIODES ARE RD10ES-T1B1
ALL RESISTANCE VALUES ARE IN OHMS. (1/8W)

6

4.40 REAR CIRCUIT BOARD

5

4


1
2
3
4
5
6
7
40
PRK20234 REAR PWB
PRK20234 A[redacted] REAR PWB ASS'Y
SCC 11
TIMER PB
SW1
OFF
PB
C
SW2
REC
OFF
PB
B
TIMER REC/PB
A
S IN
JA1
S OUT
JA2
SYNC IN
LINE IN
LINE OUT-2
LINE OUT-1
AUDIO MONITOR
JA4
HI-FI
L
R
JA5
AUDIO IN
AUDIO OUT
A1
A2
JA6
NORM
D1
D2
D3
D4
D5
D6
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D20
D21
D22
D23
D24
D25
D26
D27
D28
D29
D30
D31
D32
D33
D34
R1
R2
R4
R9
K1
K2
K3
K4
K5
K6
K7
K8
K9
K10
K11
K12
K13
K14
K15
K16
K17
K18
K19
K20
K21
CN1
CN2
CN3
CN4
10

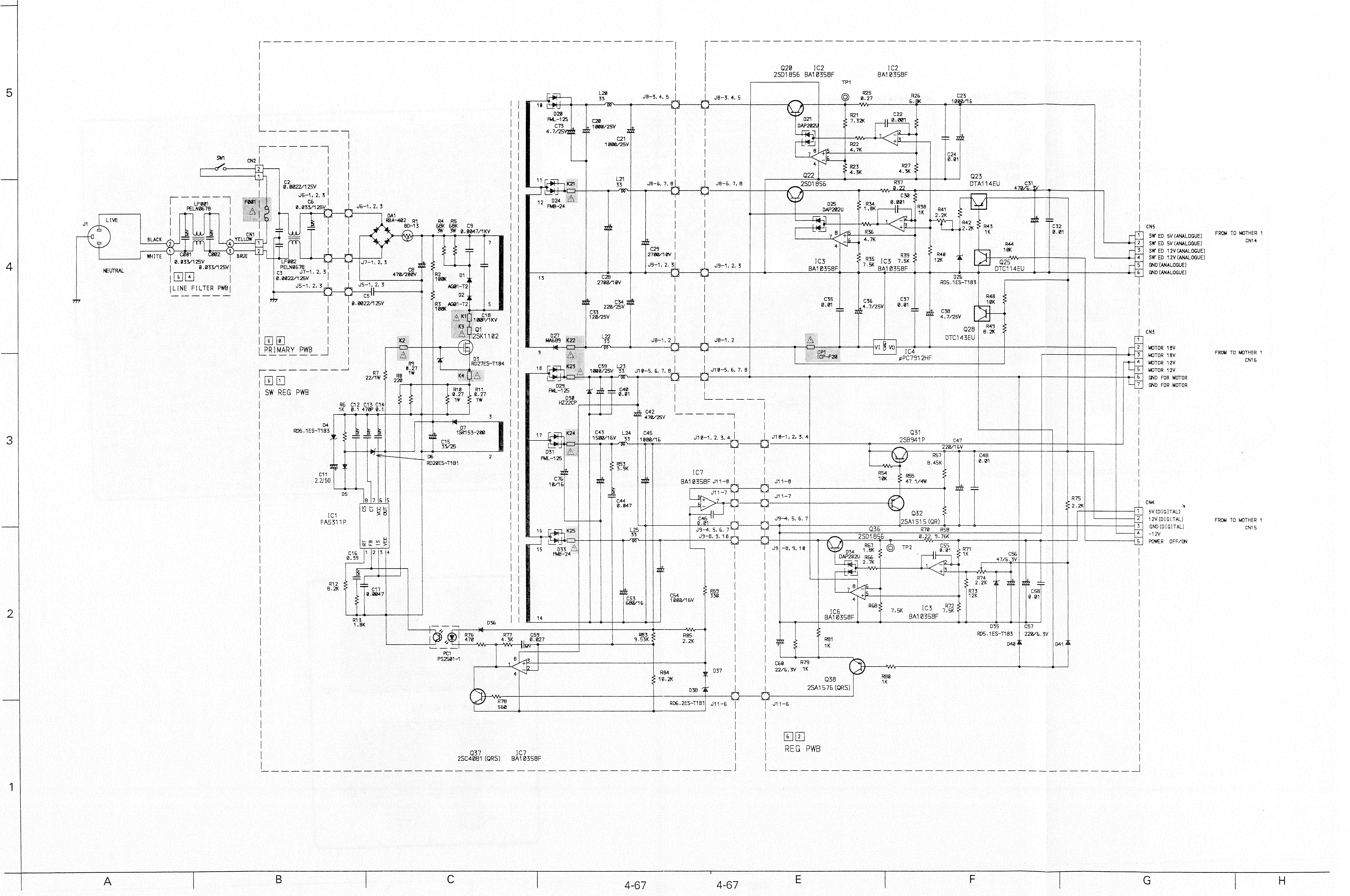
3

2

1

A B C D E F G H

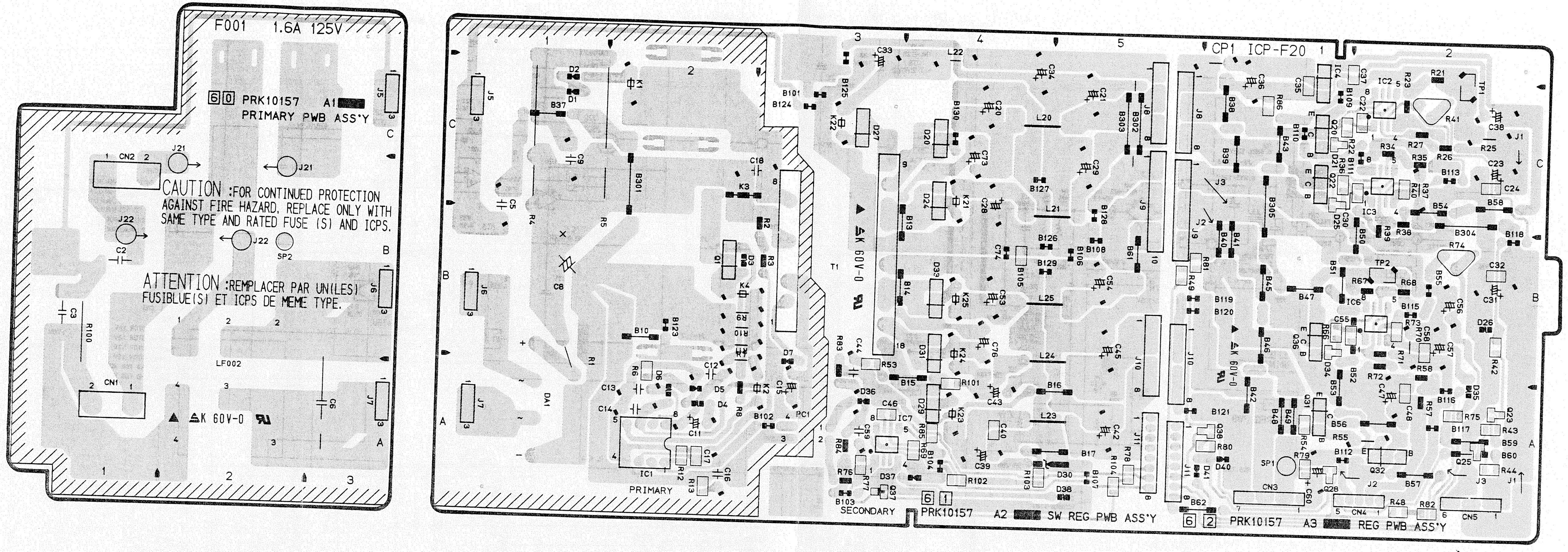
4.41 SWITCHING REGULATOR SCHEMATIC DIAGRAM

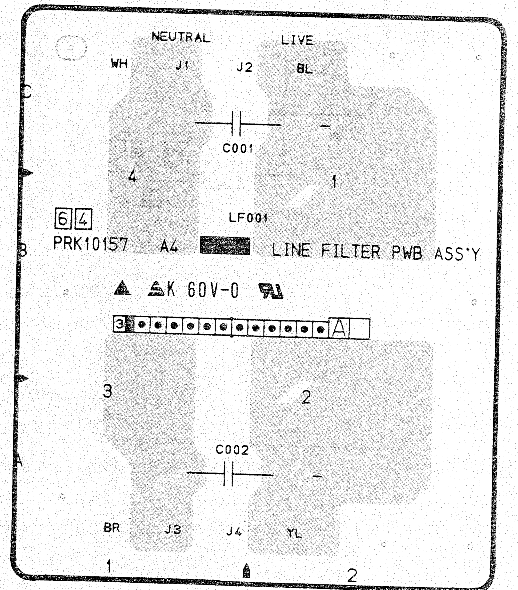


J1
LIVE
NEUTRAL
BLACK
WHITE
LF001
PELN0678
C001
0.033/125V
C002
0.033/125V
LINE FILTER PWB
SW1
CN2
CN1
YELLOW
BRWE
F001
C2
0.0022/125V
J6-1, 2, 3
C6
0.033/125V
LF002
PELN0678
C3
0.0022/125V
J7-1, 2, 3
J5-1, 2, 3
C5
0.0022/125V
PRIMARY PWB
SW REG PWB
DA1
RBA-402
R1
8D-13
R4
68K
3W
R5
68K
3W
C9
0.0047/1KV
C8
470/200V
R2
100K
R3
100K
D1
AG01-T2
D2
AG01-T2
C10
100P/1KV
K1
K2
K3
K4
Q1
2SK1102
D3
RD27ES-T1B4
R9
0.27
1W
R7
22/1W
R8
220
R10
0.27
1W
R11
0.27
1W
R6
1K
C12
0.1
C13
470P
C14
0.1
D4
RD5.1ES-T1B3
C11
2.2/50
D5
D6
RD20ES-T1B1
D7
1SR153-200
C15
33/25
IC1
FA5311P
CS
CT
VCC
OUT
RT
FB
IS
VEE
C16
0.39
R12
8.2K
C17
0.0047
R13
1.8K
D36
PC1
PS2501-1
R76
470
R77
4.3K
C59
0.027
R78
560
Q37
2SC4081 (QRS)
IC7
BA10358F
D20
FML-12S
C73
4.7/25V
L20
33
C20
1000/25V
C21
1000/25V
J8-3, 4, 5
K21
D24
FMB-24
L21
33
J8-6, 7, 8
C29
2700/10V
C28
2700/10V
J9-1, 2, 3
C33
120/25V
C34
220/25V
D27
MA6B9
K22
L22
33
J8-1, 2
K23
D29
FML-12S
C39
1000/25V
L23
33
J10-5, 6, 7, 8
C40
0.01
D30
HZ22CP
C42
470/25V
K24
D31
FML-12S
C43
1500/16V
L24
33
C45
1000/16
J10-1, 2, 3, 4
R53
3.9K
C76
10/16
C44
0.047
IC7
BA10358F
J11-8
J11-7
C46
0.01
J9-4, 5, 6, 7
J9-8, 9, 10
K25
D33
FMB-24
L25
33
C53
680/16
C54
1000/16V
R69
330
R83
9.53K
R85
2.2K
R84
10.2K
D37
D38
RD6.2ES-T1B1
J11-6
Q20
2SD1856
IC2
BA10358F
IC2
BA10358F
TP1
R25
0.27
R26
6.8K
C23
1000/16
D21
DAP202U
R21
7.32K
C22
0.001
R22
4.7K
R23
4.3K
R27
4.5K
C24
0.01
Q22
2SD1856
D25
DAP202U
R37
0.22
C30
0.001
R34
1.8K
R36
4.7K
R38
1K
R41
2.2K
R42
2.2K
R43
1K
Q23
DTA114EU
C31
470/6.3V
C32
0.01
IC3
BA10358F
R35
7.5K
IC3
BA10358F
R39
7.5K
R40
12K
D26
RD5.1ES-T1B3
R44
10K
Q25
DTC114EU
C35
0.01
C36
4.7/25V
C37
0.01
C38
4.7/25V
R48
10K
Q28
DTC143EU
R49
8.2K
CP1
ICP-F20
IC4
μPC7912HF
VI
G
VO
Q31
2SB941P
C47
220/16V
R57
8.45K
C48
0.01
R54
10K
R55
47 1/4W
Q32
2SA1515 (QR)
Q36
2SD1856
R70
0.22
R58
9.76K
TP2
R67
1.8K
C55
0.01
R71
1K
D34
DAP202U
R66
2.7K
C56
47/6.3V
R74
2.2K
R73
12K
C58
0.01
IC5
BA10358F
R68
7.5K
IC3
BA10358F
R72
7.5K
D35
RD5.1ES-T1B3
C57
220/6.3V
D40
D41
R75
2.2K
R81
1K
C60
22/6.3V
R79
1K
Q38
2SA1576 (QRS)
R80
1K
REG PWB
CN5
SW ED 5V (ANALOGUE)
SW ED 5V (ANALOGUE)
SW ED 12V (ANALOGUE)
SW ED 12V (ANALOGUE)
GND (ANALOGUE)
GND (ANALOGUE)
FROM TO MOTHER 1
CN14
CN3
MOTOR 18V
MOTOR 18V
MOTOR 12V
MOTOR 12V
GND FOR MOTOR
GND FOR MOTOR
FROM TO MOTHER 1
CN16
CN4
5V (DIGITAL)
12V (DIGITAL)
GND (DIGITAL)
-12V
POWER OFF/ON
FROM TO MOTHER 1
CN15
6
5
4
3
2
1
A
B
C
E
F
G
H

4.42 SWITCHING REGULATOR CIRCUIT BOARD

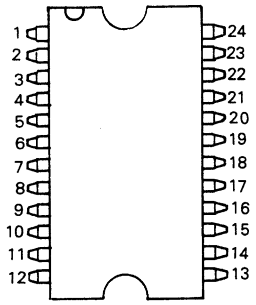
— SOLDER Side —

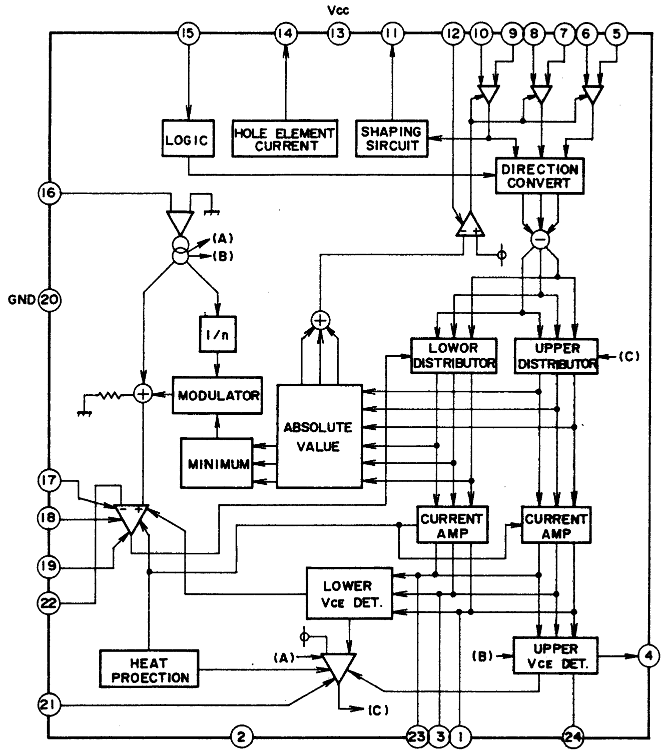

F001 1.6A 125V
60 PRK10157 A1
PRIMARY PWB ASS'Y
CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE (S) AND ICPS.
ATTENTION :REMPLACER PAR UN(LES) FUSIBLE(S) ET ICPS DE MEME TYPE.
K 60V-0
LF002
CN1
CN2
J21
J22
SP2
PRIMARY
T1
SECONDARY
61 PRK10157 A2 SW REG PWB ASS'Y
CP1 ICP-F20
62 PRK10157 A3 REG PWB ASS'Y
CN3
CN4
CN5
SP1


NEUTRAL
LIVE
WH
BL
J1
J2
C001
LF001
64 PRK10157 A4 LINE FILTER PWB ASS'Y
K 60V-0
C002
BR
YL
J3
J4

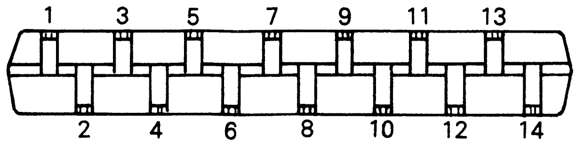
4.43 IC BLOCK DIAGRAM

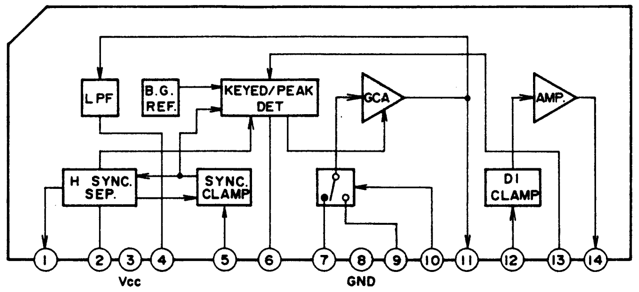
■ AN3834K 【MATSUSHITA】
(VTR Reel Motor Drive)


1
2
3
4
5
6
7
8
9
10
11
12
24
23
22
21
20
19
18
17
16
15
14
13

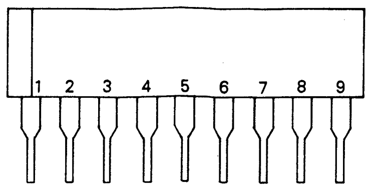

Vcc
15
14
13
11
12
10
9
8
7
6
5
LOGIC
HOLE ELEMENT CURRENT
SHAPING SIRCUIT
DIRECTION CONVERT
16
(A)
(B)
GND 20
1/n
MODULATOR
MINIMUM
ABSOLUTE VALUE
LOWOR DISTRIBUTOR
UPPER DISTRIBUTOR
(C)
17
18
19
22
CURRENT AMP
CURRENT AMP
LOWER VCE DET.
HEAT PROECTION
(A)
(B)
UPPER VCE DET.
4
21
(C)
2
23
3
1
24

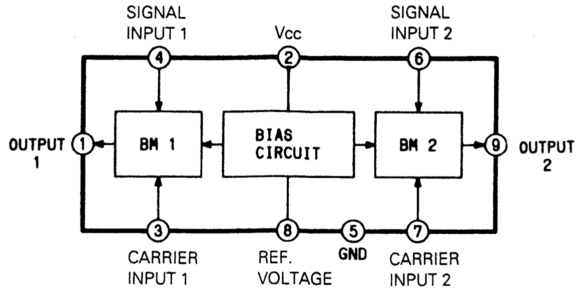
■ AN3916 【MATSUSHITA】
(Video AGC)


1
3
5
7
9
11
13
2
4
6
8
10
12
14

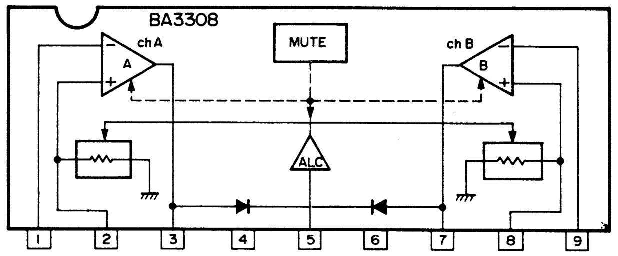

LPF
B.G. REF.
KEYED/PEAK DET
GCA
AMP
H SYNC. SEP.
SYNC. CLAMP
DI CLAMP
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Vcc
GND

■ AN6041 【MATSUSHITA】
(Dual Balanced Modulator)

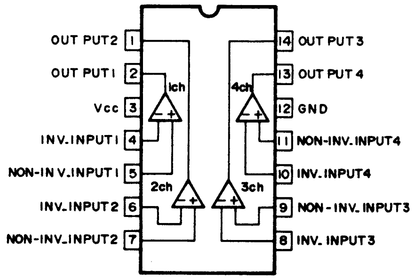


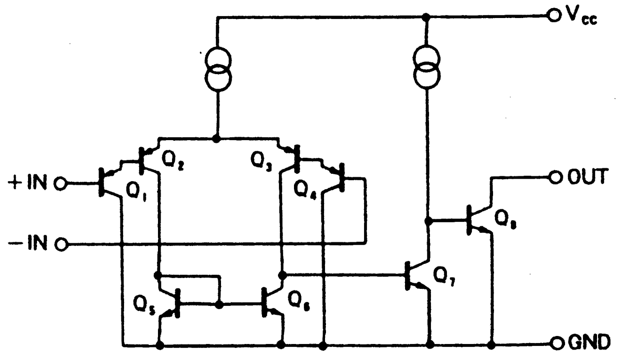

SIGNAL INPUT 1
Vcc
SIGNAL INPUT 2
4
2
6
OUTPUT 1
1
BM 1
BIAS CIRCUIT
BM 2
9
OUTPUT 2
3
8
5
7
CARRIER INPUT 1
REF. VOLTAGE
GND
CARRIER INPUT 2

■ BA3308F 【ROHM】
(Dual Pre.Amp With ALC)

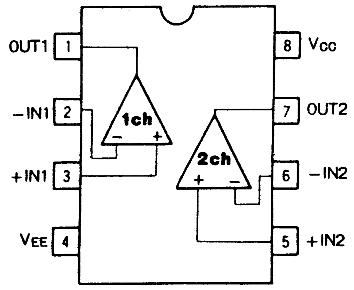

BA3308
chA
A
MUTE
chB
B
ALC
1
2
3
4
5
6
7
8
9

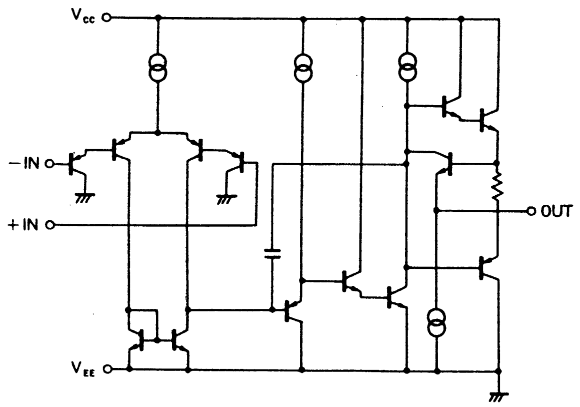
■ BA10339F 【ROHM】
(Quad Comparator)


OUT PUT2 1
OUT PUT1 2
Vcc 3
INV.INPUT1 4
NON-INV.INPUT1 5
INV.INPUT2 6
NON-INV.INPUT2 7
14 OUT PUT3
13 OUT PUT4
12 GND
11 NON-INV.INPUT4
10 INV.INPUT4
9 NON-INV.INPUT3
8 INV.INPUT3
1ch
4ch
2ch
3ch


Vcc
+IN
−IN
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
OUT
GND

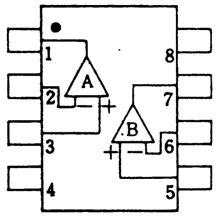
■ BA10358F 【ROHM】
(Dual Ground Sense Op.Amp)


OUT1 1
−IN1 2
+IN1 3
VEE 4
8 Vcc
7 OUT2
6 −IN2
5 +IN2
1ch
2ch


Vcc
−IN
+IN
VEE
OUT

■ BA10393F 【ROHM】
(Dual Comparator)

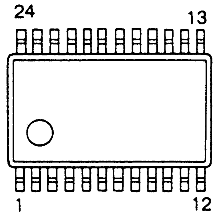
(Top View)

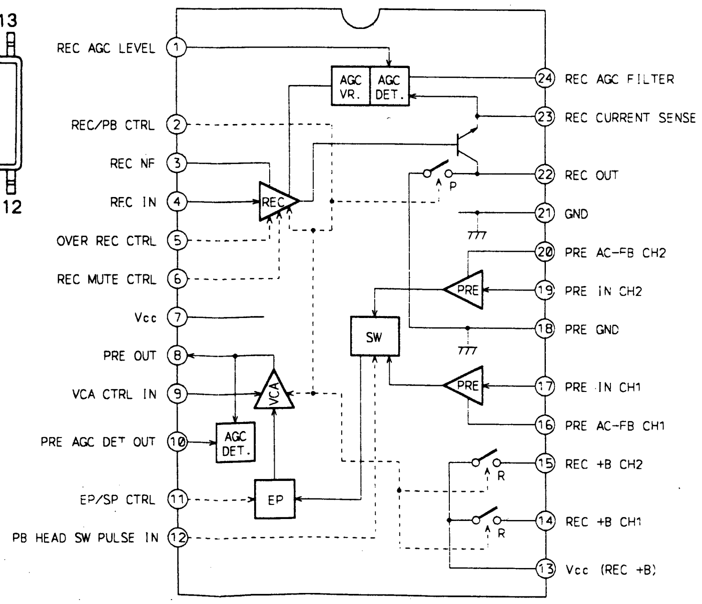

1
2
3
4
5
6
7
8
A
B

Pin

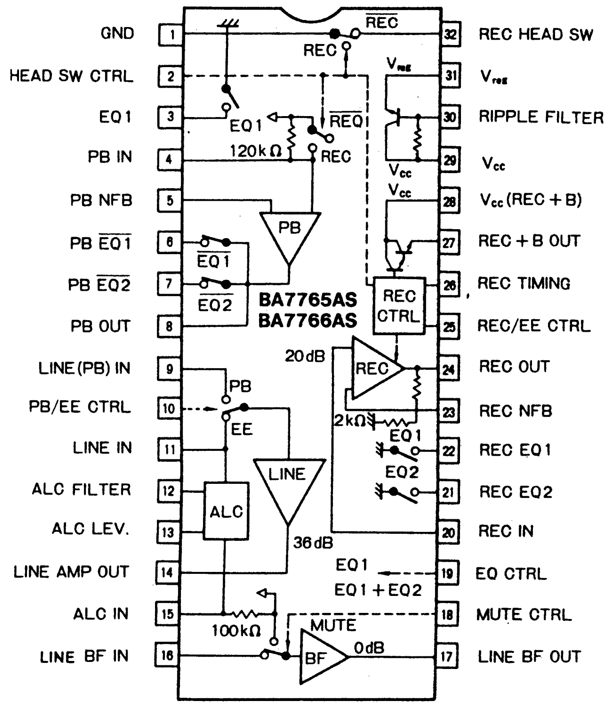
1. A OUTPUT
2. A−INPUT
3. A+INPUT
4. V^-
5. B+INPUT
6. B−INPUT
7. B OUTPUT
8. V^+

■ BA7743FS 【ROHM】
(VTR HiFi Audio Signal REC/PB Amp.)

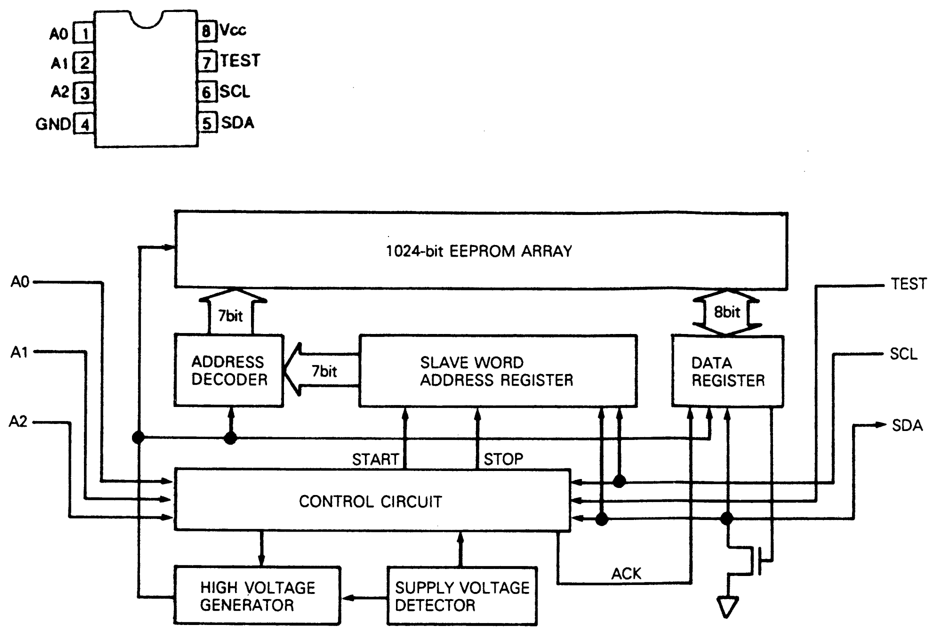



REC AGC LEVEL 1
REC/PB CTRL 2
REC NF 3
REC IN 4
OVER REC CTRL 5
REC MUTE CTRL 6
Vcc 7
PRE OUT 8
VCA CTRL IN 9
PRE AGC DET OUT 10
EP/SP CTRL 11
PB HEAD SW PULSE IN 12
24 REC AGC FILTER
23 REC CURRENT SENSE
22 REC OUT
21 GND
20 PRE AC-FB CH2
19 PRE IN CH2
18 PRE GND
17 PRE IN CH1
16 PRE AC-FB CH1
15 REC +B CH2
14 REC +B CH1
13 Vcc (REC +B)
AGC VR.
AGC DET.
REC
P
PRE
SW
PRE
VCA
AGC DET.
EP
R
R

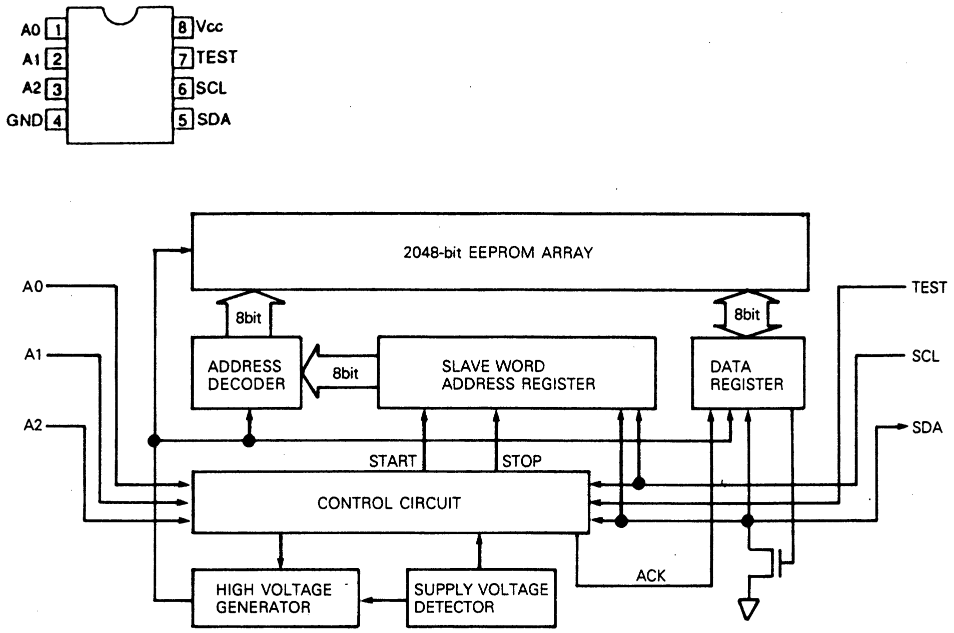
■ BA7765AS 【ROHM】
(Normal Audio Signal Processor)


GND 1
HEAD SW CTRL 2
EQ1 3
PB IN 4
PB NFB 5
PB EQ1 6
PB EQ2 7
PB OUT 8
LINE (PB) IN 9
PB/EE CTRL 10
LINE IN 11
ALC FILTER 12
ALC LEV. 13
LINE AMP OUT 14
ALC IN 15
LINE BF IN 16
32 REC HEAD SW
31 Vreg
30 RIPPLE FILTER
29 Vcc
28 Vcc (REC+B)
27 REC+B OUT
26 REC TIMING
25 REC/EE CTRL
24 REC OUT
23 REC NFB
22 REC EQ1
21 REC EQ2
20 REC IN
19 EQ CTRL
18 MUTE CTRL
17 LINE BF OUT
BA7765AS
BA7766AS
REC CTRL
PB
REC
LINE
ALC
BF
MUTE
120kΩ
100kΩ
2kΩ
20dB
36dB
0dB
EQ1
EQ2
EQ1+EQ2

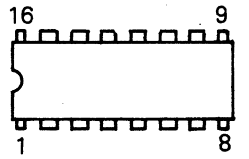
■ BR24C01AF 【ROHM】
(IIC Bus 1k Serial EEPROM)


A0 1
A1 2
A2 3
GND 4
8 Vcc
7 TEST
6 SCL
5 SDA
1024-bit EEPROM ARRAY
7bit
8bit
ADDRESS DECODER
7bit
SLAVE WORD ADDRESS REGISTER
DATA REGISTER
START
STOP
CONTROL CIRCUIT
ACK
HIGH VOLTAGE GENERATOR
SUPPLY VOLTAGE DETECTOR
A0
A1
A2
TEST
SCL
SDA

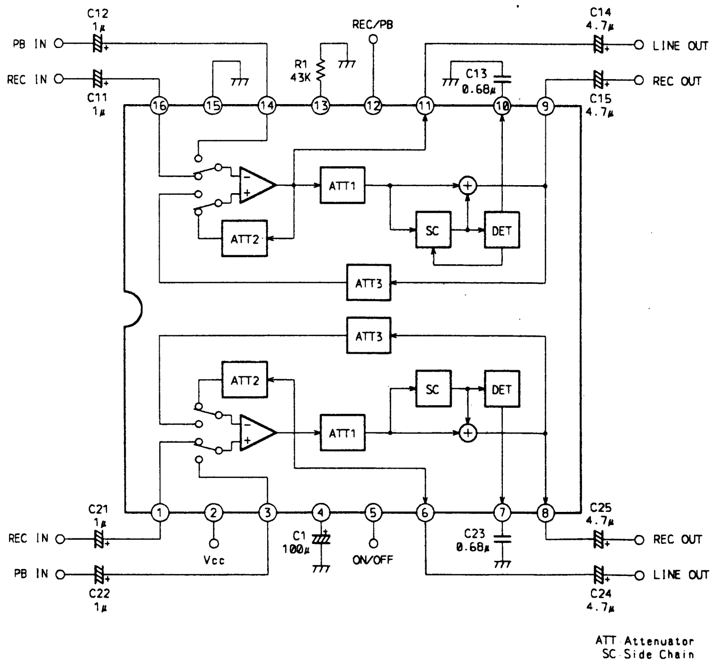
■ BR24C02F 【ROHM】
(IIC Bus 2k Serial EEPROM)


A0 1
A1 2
A2 3
GND 4
8 Vcc
7 TEST
6 SCL
5 SDA
2048-bit EEPROM ARRAY
8bit
8bit
ADDRESS DECODER
8bit
SLAVE WORD ADDRESS REGISTER
DATA REGISTER
START
STOP
CONTROL CIRCUIT
ACK
HIGH VOLTAGE GENERATOR
SUPPLY VOLTAGE DETECTOR
A0
A1
A2
TEST
SCL
SDA

■ CXA1101P 【SONY】
(Dolby Noise Reduction Circuit)

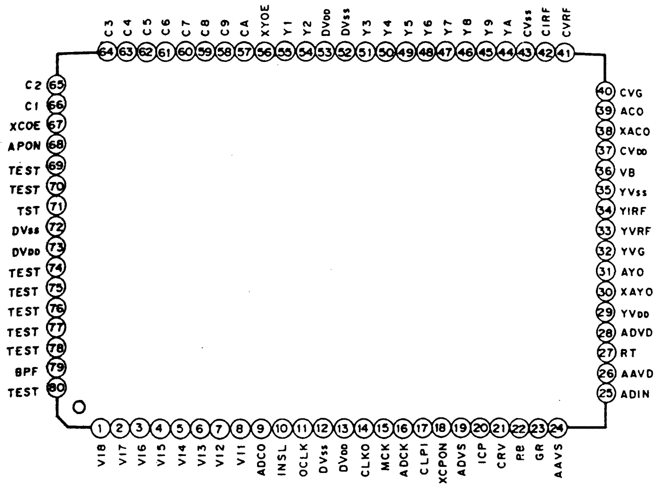


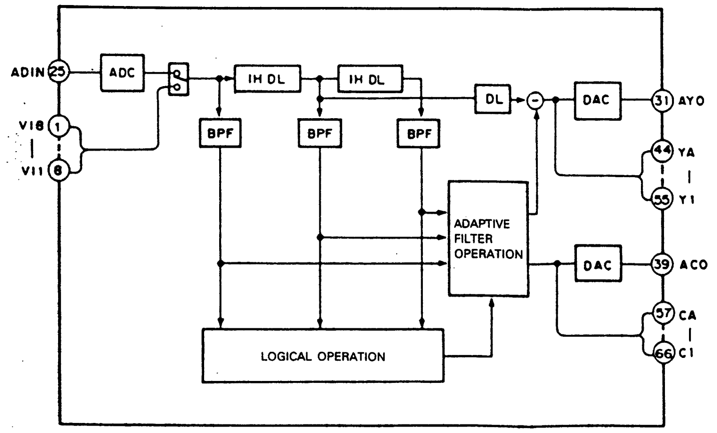
—CXA1102M—


C12 1μ
PB IN
REC IN
C11 1μ
REC/PB
R1 43K
C13 0.68μ
C14 4.7μ
LINE OUT
REC OUT
C15 4.7μ
ATT1
ATT2
ATT3
SC
DET
C21 1μ
REC IN
PB IN
C22 1μ
Vcc
C1 100μ
ON/OFF
C23 0.68μ
C25 4.7μ
REC OUT
LINE OUT
C24 4.7μ

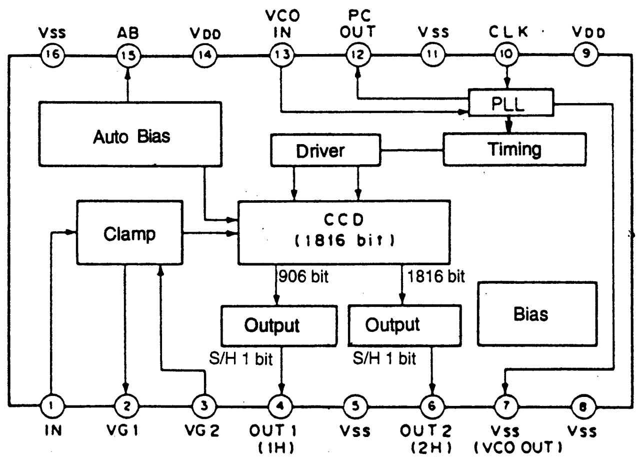
ATT Attenuator
SC Side Chain
DET Detector

■ CXD2023Q 【SONY】
(Digital COMB Filter)

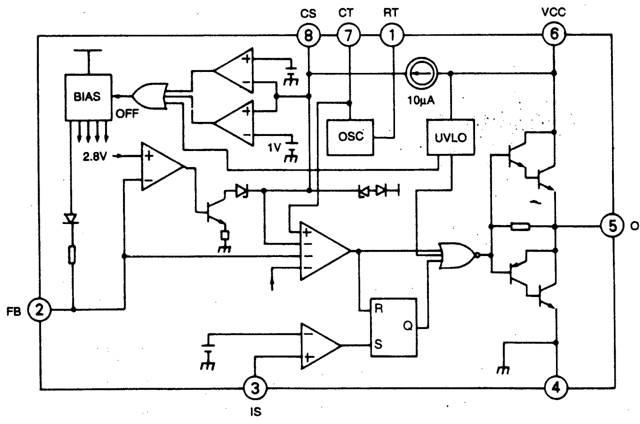

C2 65
C1 66
XCOE 67
APON 68
TEST 69
TEST 70
TST 71
DVss 72
DVDD 73
TEST 74
TEST 75
TEST 76
TEST 77
TEST 78
BPF 79
TEST 80
40 CVG
39 ACO
38 XACO
37 CVDD
36 VB
35 YVss
34 YIRF
33 YVRF
32 YVG
31 AYO
30 XAYO
29 YVDD
28 ADVD
27 RT
26 AAVD
25 ADIN

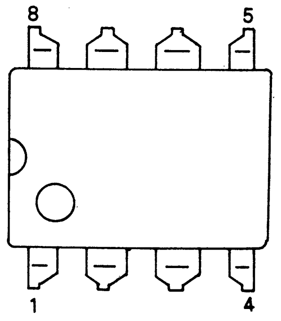

ADIN 25
ADC
1H DL
1H DL
DL
DAC
31 AYO
V18 1
V11 8
BPF
BPF
BPF
44 YA
55 Y1
ADAPTIVE FILTER OPERATION
DAC
39 ACO
57 CA
66 C1
LOGICAL OPERATION

■ CXL5509M 【SONY】
(NTSC CMOS-CCD 1H/2H Delay Line)

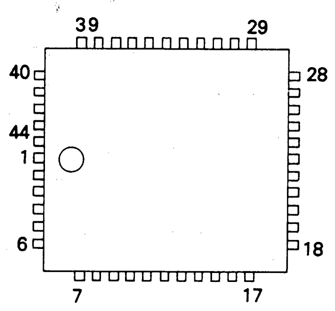

VSS 16
AB 15
VDD 14
VCO IN 13
PC OUT 12
VSS 11
CLK 10
VDD 9
PLL
Auto Bias
Driver
Timing
Clamp
CCD (1816 bit)
906 bit
1816 bit
Output
Output
Bias
S/H 1 bit
S/H 1 bit
1 IN
2 VG1
3 VG2
4 OUT1 (1H)
5 Vss
6 OUT2 (2H)
7 Vss (VCO OUT)
8 Vss

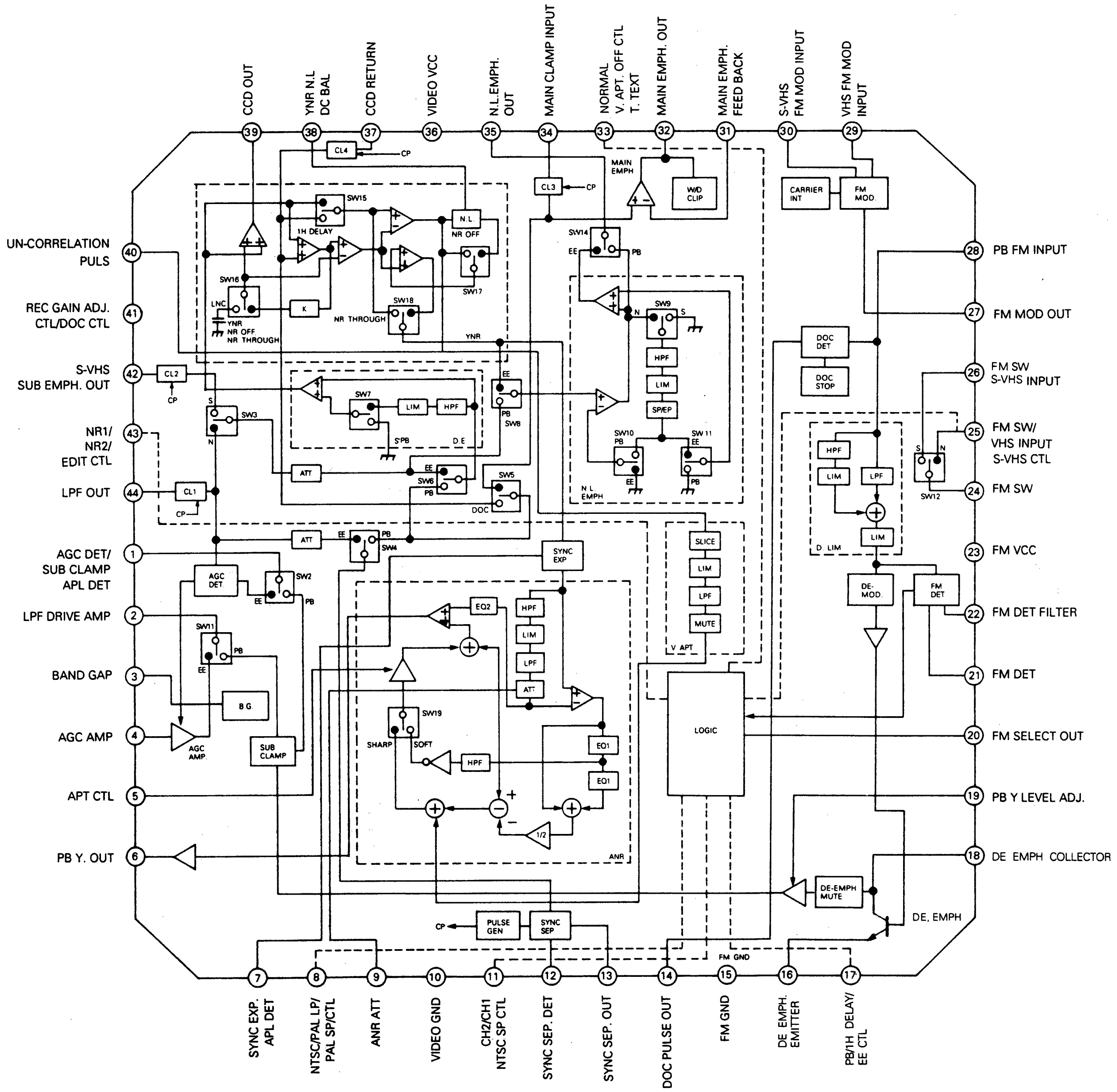
■ FA5311P 【FUJI ELECTRIC】
(PWM Switching Regulator)


CS 8
CT 7
RT 1
VCC 6
BIAS
OFF
2.8V
1V
10μA
OSC
UVLO
5 OUT
FB 2
R
S
Q
3 IS
4

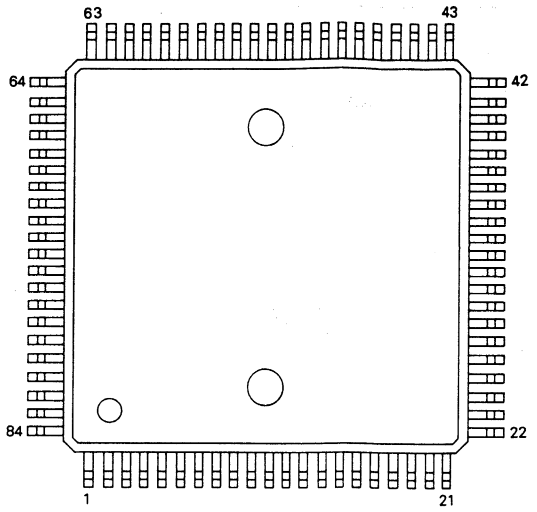


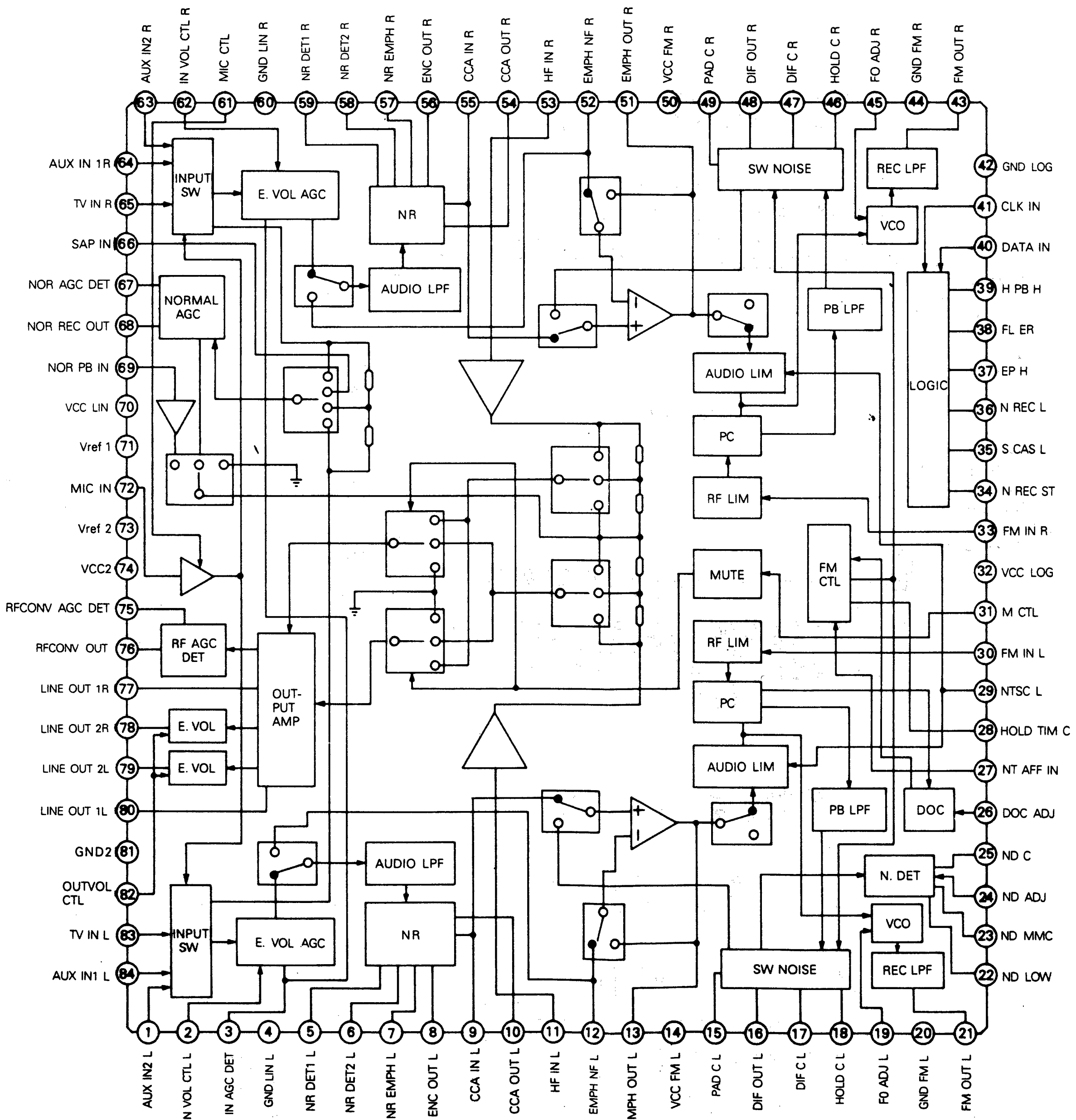
■ JCP0032-HT 【JVC】
(FM Signal Processor)


39
29
40
28
44
1
6
18
7
17

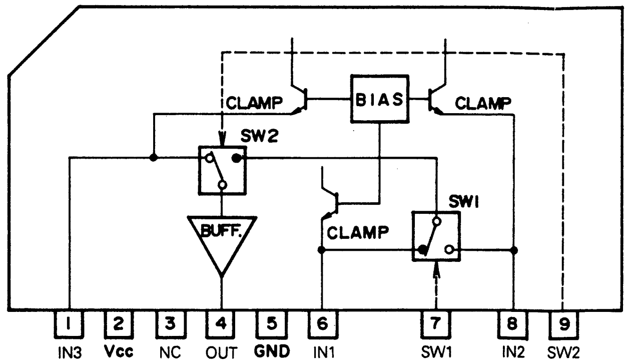

CCD OUT
YNR N.L DC BAL
CCD RETURN
VIDEO VCC
N.L.EMPH. OUT
MAIN CLAMP INPUT
NORMAL V. APT. OFF CTL T. TEXT
MAIN EMPH. OUT
MAIN EMPH. FEED BACK
S-VHS FM MOD INPUT
VHS FM MOD INPUT
UN-CORRELATION PULS
REC GAIN ADJ. CTL/DOC CTL
S-VHS SUB EMPH. OUT
NR1/ NR2/ EDIT CTL
LPF OUT
AGC DET/ SUB CLAMP APL DET
LPF DRIVE AMP
BAND GAP
AGC AMP
APT CTL
PB Y. OUT
PB FM INPUT
FM MOD OUT
FM SW S-VHS INPUT
FM SW/ VHS INPUT S-VHS CTL
FM SW
FM VCC
FM DET FILTER
FM DET
FM SELECT OUT
PB Y LEVEL ADJ.
DE EMPH COLLECTOR
SYNC EXP. APL DET
NTSC/PAL LP/ PAL SP/CTL
ANR ATT
VIDEO GND
CH2/CH1 NTSC SP CTL
SYNC SEP. DET
SYNC SEP. OUT
DOC PULSE OUT
FM GND
DE. EMPH. EMITTER
PB/1H DELAY/ EE CTL
CL4
CP
SW15
N L
NR OFF
1H DELAY
SW16
SW17
SW18
K
NR THROUGH
YNR
LNC
NR OFF
NR THROUGH
CL3
MAIN EMPH
W/D CLIP
CARRIER INT
FM MOD
SW14
EE
PB
SW9
HPF
LIM
SP/EP
SW10
SW11
N L EMPH
CL2
SW3
SW7
LIM
HPF
ATT
SW6
SW5
DOC
CL1
SW4
SYNC EXP
AGC DET
SW2
SW1
BG
AGC AMP
SUB CLAMP
EQ2
LPF
SW19
SHARP
SOFT
EQ1
1/2
ANR
SLICE
MUTE
V APT
LOGIC
DOC DET
DOC STOP
D LIM
DE-MOD
FM DET
SW12
DE-EMPH MUTE
DE. EMPH
PULSE GEN
SYNC SEP
FM GND

■ JCP0038 【JVC】
(FMA Signal Processor)

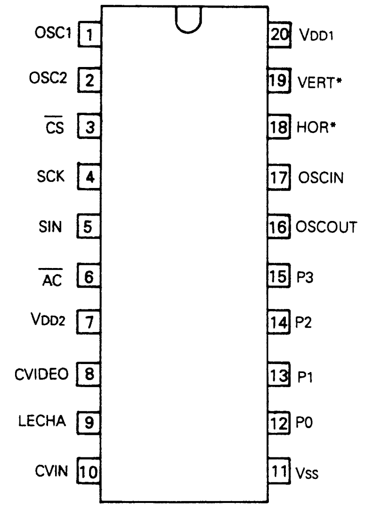

63
43
64
42
84
22
1
21

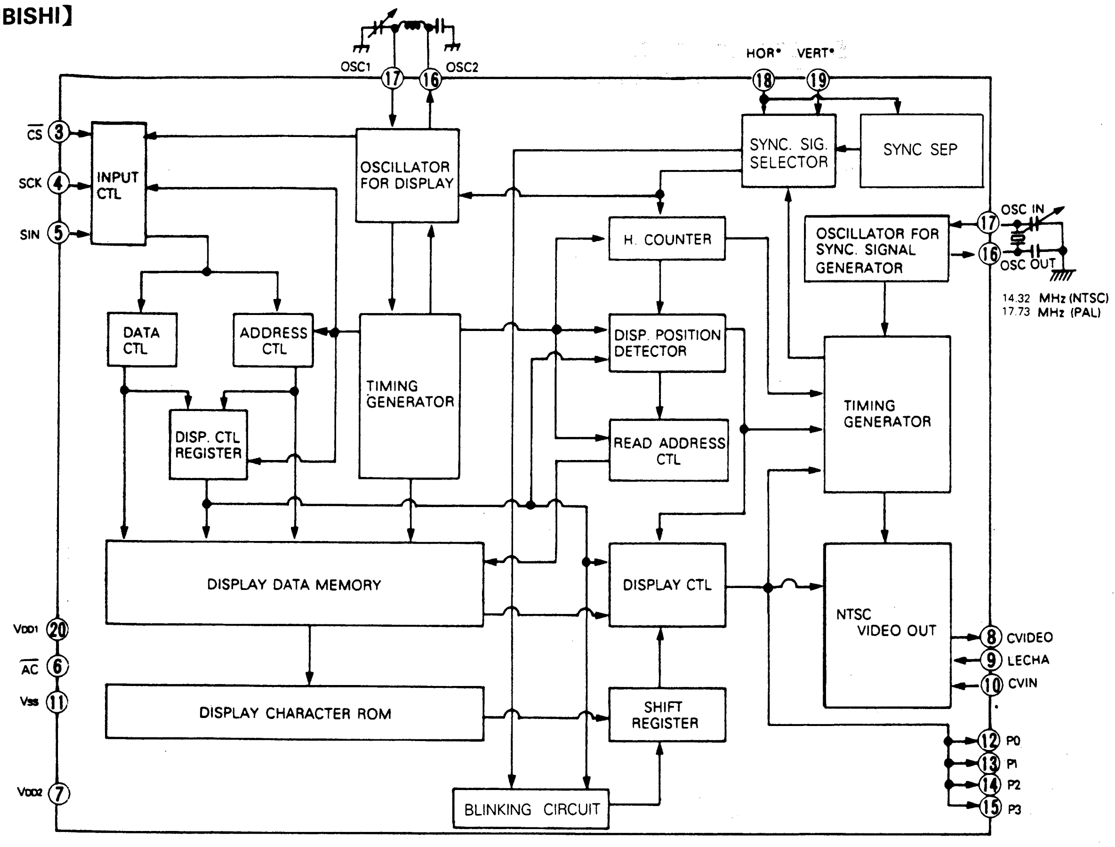

AUX IN2 R
IN VOL CTL R
MIC CTL
GND LIN R
NR DET1 R
NR DET2 R
NR EMPH R
ENC OUT R
CCA IN R
CCA OUT R
HF IN R
EMPH NF R
EMPH OUT R
VCC FM R
PAD C R
DIF OUT R
DIF C R
HOLD C R
FO ADJ R
GND FM R
FM OUT R
AUX IN 1R
TV IN R
SAP IN
NOR AGC DET
NOR REC OUT
NOR PB IN
VCC LIN
Vref 1
MIC IN
Vref 2
VCC2
RFCONV AGC DET
RFCONV OUT
LINE OUT 1R
LINE OUT 2R
LINE OUT 2L
LINE OUT 1L
GND2
OUTVOL CTL
TV IN L
AUX IN1 L
GND LOG
CLK IN
DATA IN
H PB H
FL ER
EP H
N REC L
S CAS L
N REC ST
FM IN R
VCC LOG
M CTL
FM IN L
NTSC L
HOLD TIM C
NT AFF IN
DOC ADJ
ND C
ND ADJ
ND MMC
ND LOW
AUX IN2 L
IN VOL CTL L
IN AGC DET
GND LIN L
NR DET1 L
NR DET2 L
NR EMPH L
ENC OUT L
CCA IN L
CCA OUT L
HF IN L
EMPH NF L
EMPH OUT L
VCC FM L
PAD C L
DIF OUT L
DIF C L
HOLD C L
FO ADJ L
GND FM L
FM OUT L
INPUT SW
E. VOL AGC
NR
AUDIO LPF
NORMAL AGC
SW NOISE
REC LPF
VCO
LOGIC
PB LPF
AUDIO LIM
PC
RF LIM
MUTE
FM CTL
RF AGC DET
OUT-PUT AMP
E. VOL
DOC
N. DET

■ LVA523SA 【MITSUMI】
(Switch)


CLAMP
BIAS
CLAMP
SW2
BUFF.
CLAMP
SW1
1 IN3
2 Vcc
3 NC
4 OUT
5 GND
6 IN1
7 SW1
8 IN2
9 SW2

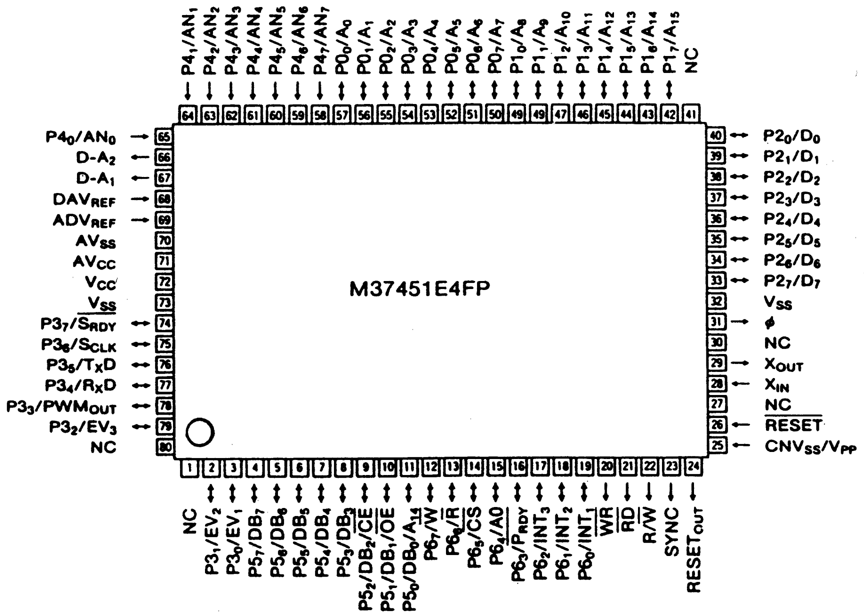
■ M35010-089SP 【MITSUBISHI】
(Charactor Generator)


OSC1 1
OSC2 2
CS 3
SCK 4
SIN 5
AC 6
VDD2 7
CVIDEO 8
LECHA 9
CVIN 10
20 VDD1
19 VERT*
18 HOR*
17 OSCIN
16 OSCOUT
15 P3
14 P2
13 P1
12 P0
11 Vss

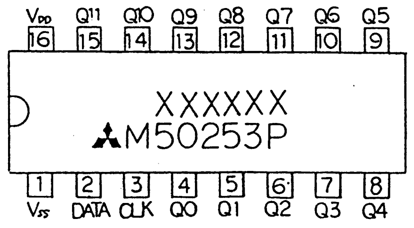

OSC1 17
16 OSC2
HOR* 18
VERT* 19
CS 3
SCK 4
SIN 5
INPUT CTL
OSCILLATOR FOR DISPLAY
SYNC. SIG. SELECTOR
SYNC SEP
H. COUNTER
OSCILLATOR FOR SYNC. SIGNAL GENERATOR
OSC IN 17
OSC OUT 16
14.32 MHz (NTSC)
17.73 MHz (PAL)
DATA CTL
ADDRESS CTL
TIMING GENERATOR
DISP. POSITION DETECTOR
TIMING GENERATOR
DISP. CTL REGISTER
READ ADDRESS CTL
DISPLAY DATA MEMORY
DISPLAY CTL
NTSC VIDEO OUT
VDD1 20
AC 6
Vss 11
DISPLAY CHARACTER ROM
SHIFT REGISTER
8 CVIDEO
9 LECHA
10 CVIN
12 P0
13 P1
14 P2
15 P3
VDD2 7
BLINKING CIRCUIT

* : Input/output polarity of HOR and VERT is selectable at determination of charactor font.

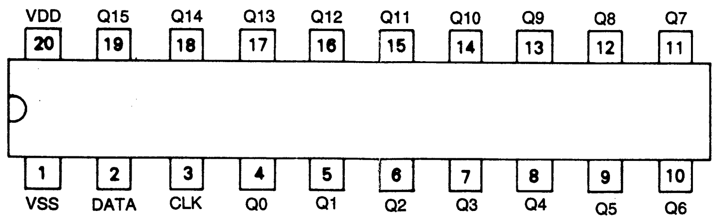
■ M37451E8-000FP 【JVC】
(8 Bit CMOS Micro Computer)

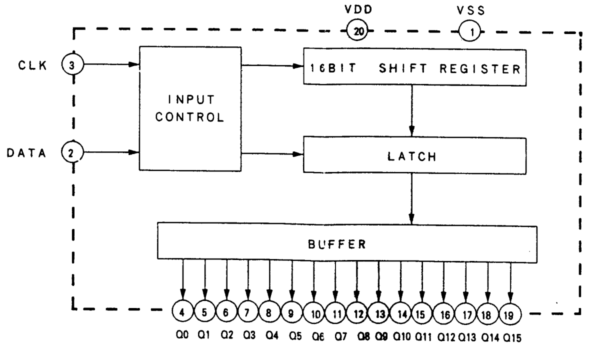

M37451E4FP
P4₁/AN₁ P4₂/AN₂ P4₃/AN₃ P4₄/AN₄ P4₅/AN₅ P4₆/AN₆ P4₇/AN₇ P0₀/A₀ P0₁/A₁ P0₂/A₂ P0₃/A₃ P0₄/A₄ P0₅/A₅ P0₆/A₆ P0₇/A₇ P1₀/A₈ P1₁/A₉ P1₂/A₁₀ P1₃/A₁₁ P1₄/A₁₂ P1₅/A₁₃ P1₆/A₁₄ P1₇/A₁₅ NC
P4₀/AN₀ 65
D-A₂ 66
D-A₁ 67
DAVREF 68
ADVREF 69
AVSS 70
AVCC 71
VCC 72
VSS 73
P3₇/SRDY 74
P3₆/SCLK 75
P3₅/TxD 76
P3₄/RxD 77
P3₃/PWMOUT 78
P3₂/EV₃ 79
NC 80
40 P2₀/D₀
39 P2₁/D₁
38 P2₂/D₂
37 P2₃/D₃
36 P2₄/D₄
35 P2₅/D₅
34 P2₆/D₆
33 P2₇/D₇
32 VSS
31 φ
30 NC
29 XOUT
28 XIN
27 NC
26 RESET
25 CNVSS/VPP
NC P3₁/EV₂ P3₀/EV₁ P5₇/DB₇ P5₆/DB₆ P5₅/DB₅ P5₄/DB₄ P5₃/DB₃ P5₂/DB₂/CE P5₁/DB₁/OE P5₀/DB₀/A₁₆ P6₇/W P6₆/R P6₅/CS P6₄/A0 P6₃/PRDY P6₂/INT₂ P6₁/INT₁ P6₀/INT₀ WR RD R/W SYNC RESETOUT

■ M50253P 【MITSUBISHI】
(Serial/Parallel Converter)

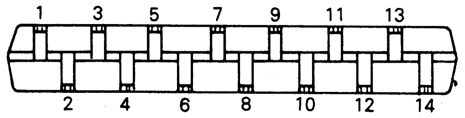

VDD 16
Q11 15
Q10 14
Q9 13
Q8 12
Q7 11
Q6 10
Q5 9
XXXXXX
M50253P
1 VSS
2 DATA
3 CLK
4 Q0
5 Q1
6 Q2
7 Q3
8 Q4

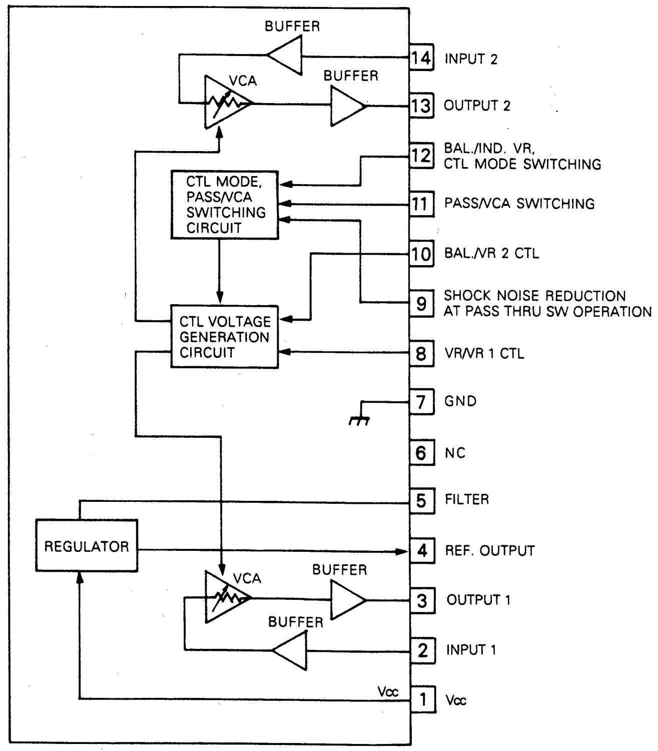
■ M50255P 【MITSUBISHI】
(16 Bit Serial/Parallel Converter)


VDD 20
Q15 19
Q14 18
Q13 17
Q12 16
Q11 15
Q10 14
Q9 13
Q8 12
Q7 11
1 VSS
2 DATA
3 CLK
4 Q0
5 Q1
6 Q2
7 Q3
8 Q4
9 Q5
10 Q6


VDD 20
VSS 1
CLK 3
DATA 2
INPUT CONTROL
16BIT SHIFT REGISTER
LATCH
BUFFER
Q0 Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15

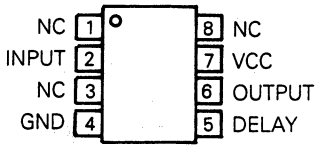
■ M51132L 【MITSUBISHI】
(2-Channel Erectrical Volume)

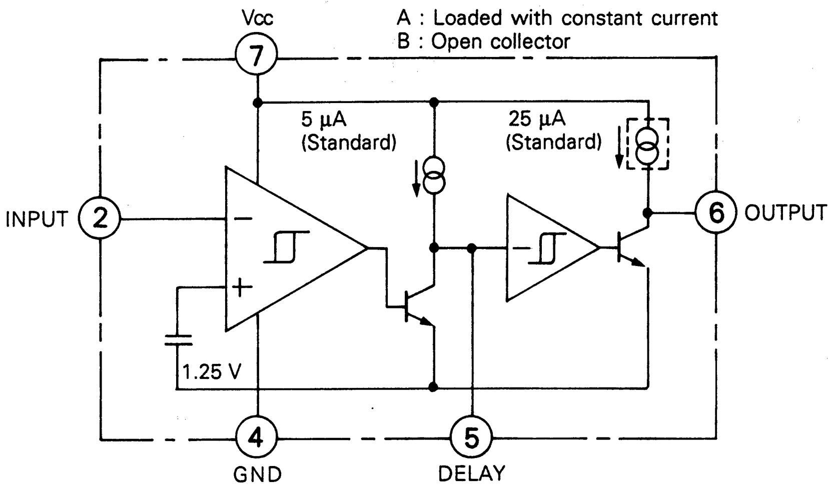

1 3 5 7 9 11 13
2 4 6 8 10 12 14


BUFFER
VCA
BUFFER
14 INPUT 2
13 OUTPUT 2
12 BAL./IND. VR, CTL MODE SWITCHING
CTL MODE, PASS/VCA SWITCHING CIRCUIT
11 PASS/VCA SWITCHING
10 BAL./VR 2 CTL
9 SHOCK NOISE REDUCTION AT PASS THRU SW OPERATION
CTL VOLTAGE GENERATION CIRCUIT
8 VR/VR 1 CTL
7 GND
6 NC
5 FILTER
REGULATOR
4 REF. OUTPUT
VCA
BUFFER
3 OUTPUT 1
BUFFER
2 INPUT 1
Vcc
1 Vcc

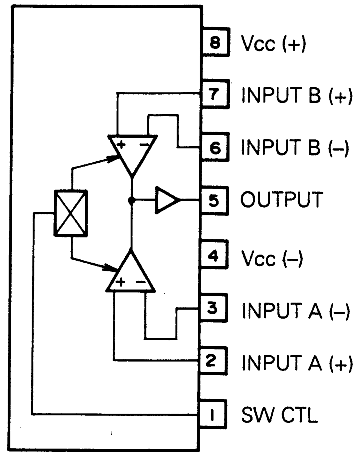
4-72

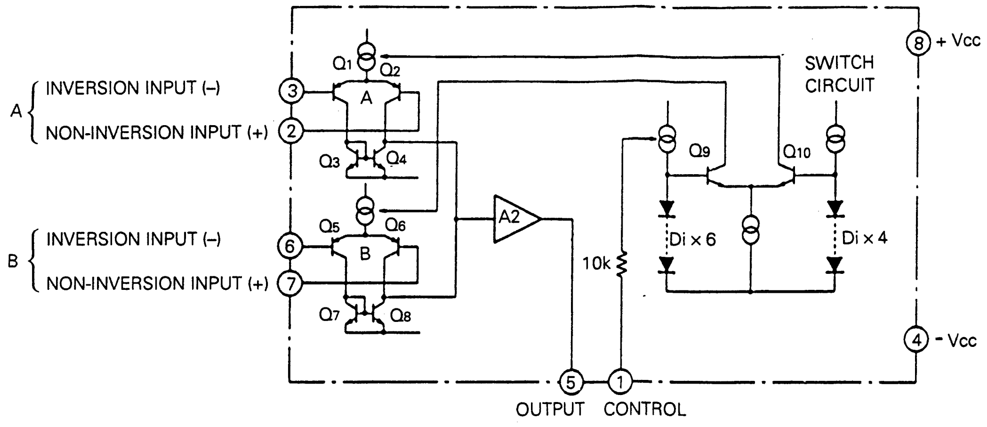
■ M51957BFP 【MITSUBISHI】
(Voltage Detector/System Reset)


NC 1
INPUT 2
NC 3
GND 4
8 NC
7 VCC
6 OUTPUT
5 DELAY


Vcc
A : Loaded with constant current
B : Open collector
7
5 µA
(Standard)
25 µA
(Standard)
INPUT 2
6 OUTPUT
1.25 V
4
GND
5
DELAY

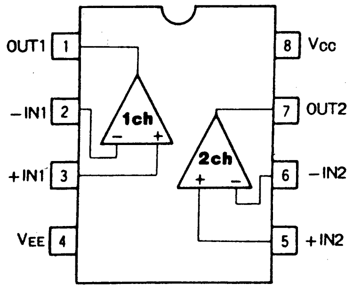
■ M5201L 【MITSUBISHI】
(Switch Op Amp.)

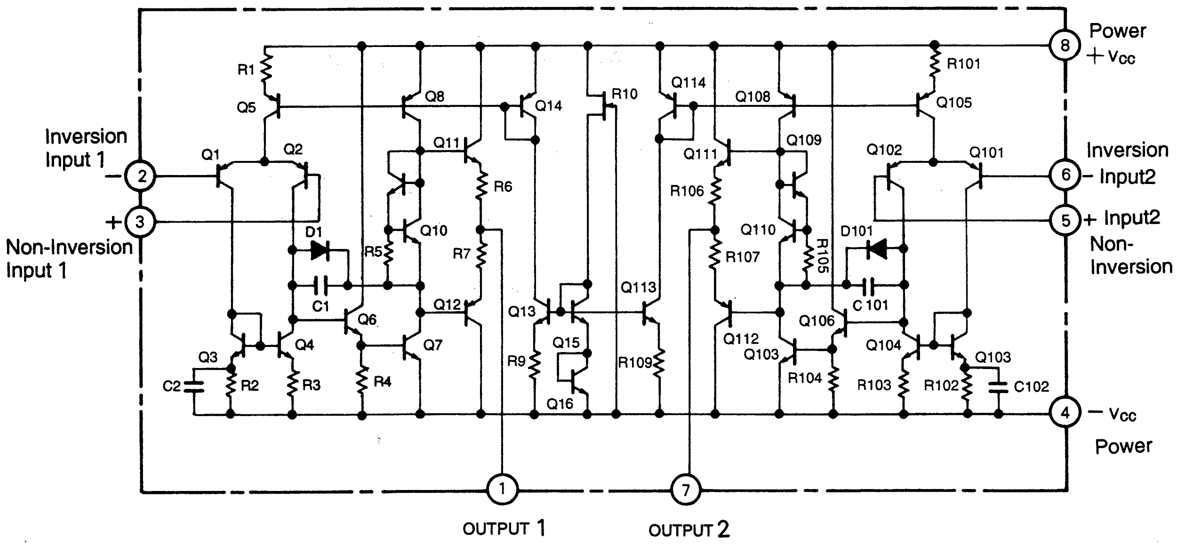

8 Vcc (+)
7 INPUT B (+)
6 INPUT B (−)
5 OUTPUT
4 Vcc (−)
3 INPUT A (−)
2 INPUT A (+)
1 SW CTL


A
INVERSION INPUT (−) 3
NON-INVERSION INPUT (+) 2
B
INVERSION INPUT (−) 6
NON-INVERSION INPUT (+) 7
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
A2
10k
Di × 6
Di × 4
SWITCH CIRCUIT
8 + Vcc
4 - Vcc
5 OUTPUT
1 CONTROL

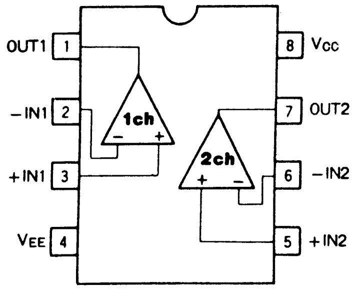
■ M5218AFP-XE1 【MITSUBISHI】
(Dual Op.Amp)

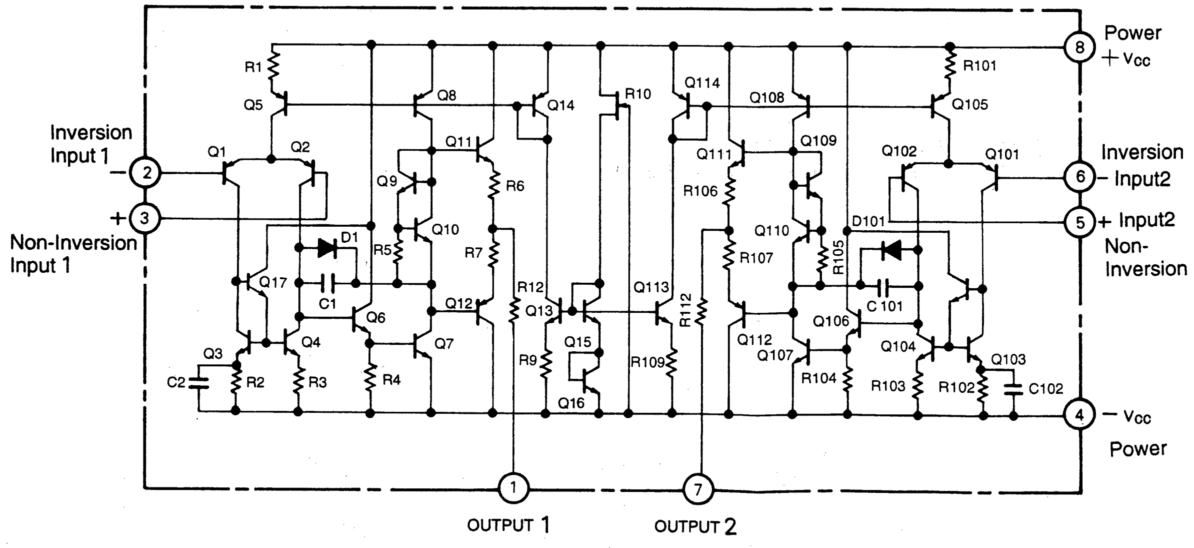
■ M5218AP 【MITSUBISHI】
(Reference M5218AFP-XE1.)


OUT1 1
−IN1 2
+IN1 3
VEE 4
8 Vcc
7 OUT2
6 −IN2
5 +IN2
1ch
2ch

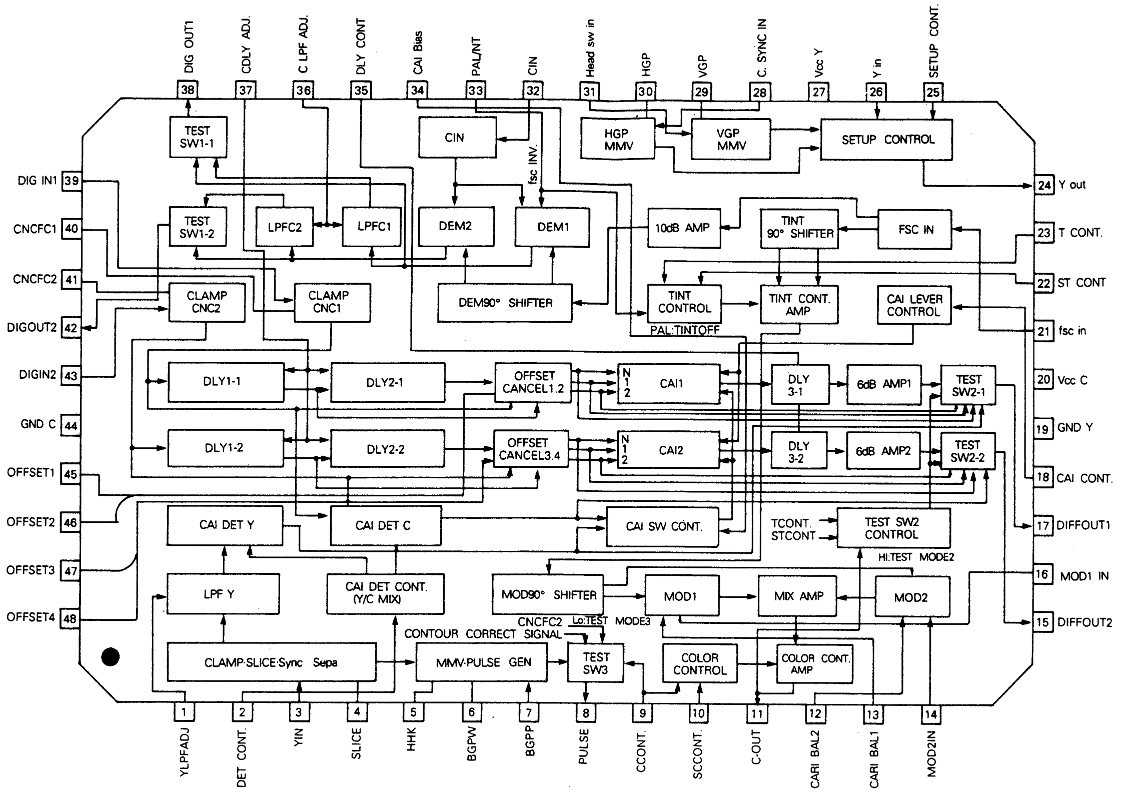

Power +Vcc 8
Inversion Input 1 − 2
+ 3 Non-Inversion Input 1
6 Inversion − Input2
5 + Input2 Non-Inversion
4 − Vcc Power
1 OUTPUT 1
7 OUTPUT 2
R1
Q5
Q1
Q2
D1
C1
R5
Q3
C2
R2
R3
Q4
Q6
R4
Q7
Q8
Q11
Q10
R6
R7
Q12
Q13
Q14
R10
Q15
Q16
R9
Q113
R109
Q114
Q108
Q111
R106
Q109
Q110
R107
R105
Q112
Q103
Q106
R104
D101
C101
Q102
Q101
Q104
R103
R102
C102
Q105
R101

■ M5220P 【MITSUBISHI】
(Dual Op.Amp)

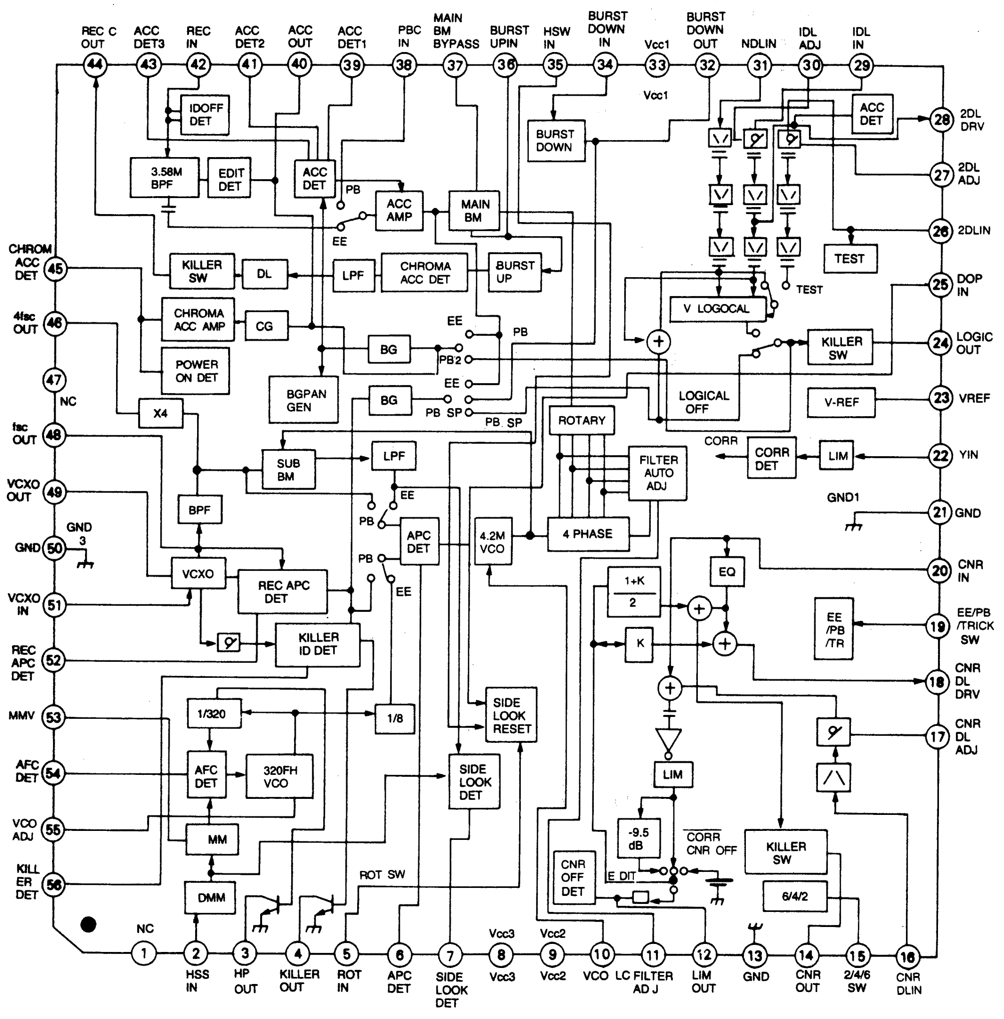

OUT1 1
−IN1 2
+IN1 3
VEE 4
8 Vcc
7 OUT2
6 −IN2
5 +IN2
1ch
2ch


Power +Vcc 8
Inversion Input 1 − 2
+ 3 Non-Inversion Input 1
6 Inversion − Input2
5 + Input2 Non-Inversion
4 − Vcc Power
1 OUTPUT 1
7 OUTPUT 2
R1
Q5
Q1
Q2
Q17
D1
C1
R5
Q9
Q3
C2
R2
R3
Q4
Q6
R4
Q7
Q8
Q11
Q10
R6
R7
Q12
R12
Q13
Q14
R10
Q15
Q16
R9
Q113
R112
R109
Q114
Q108
Q111
R106
Q109
Q110
R107
R105
Q112
Q107
Q106
R104
D101
C101
Q102
Q101
Q104
R103
R102
Q103
C102
Q105
R101

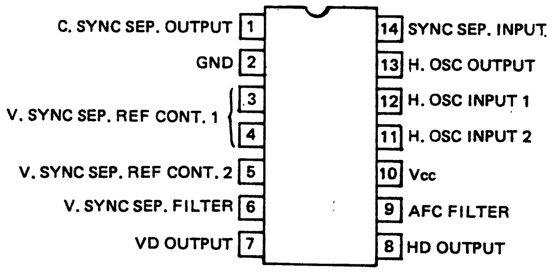
■ M52350GP 【MITSUBISHI】
(Color Signal Processer)

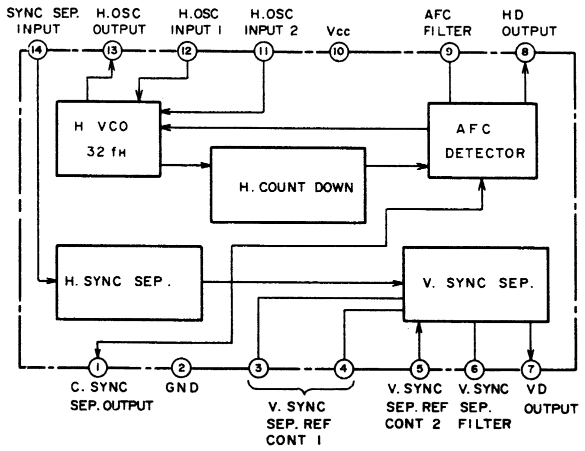

DIG OUT1
DLY ADJ.
C LPF ADJ.
DLY CONT
CAI Bias
PAL/NT
CIN
Head sw in
HGP
VGP
C. SYNC IN
Vcc Y
Y in
SETUP CONT.
DIG IN1
CNCFC1
CNCFC2
DIGOUT2
DIGIN2
GND C
OFFSET1
OFFSET2
OFFSET3
OFFSET4
Y out
T CONT.
ST CONT
fsc in
Vcc C
GND Y
CAI CONT.
DIFFOUT1
MOD1 IN
DIFFOUT2
TEST SW1-1
TEST SW1-2
LPFC2
LPFC1
CIN
DEM2
DEM1
HGP MMV
VGP MMV
SETUP CONTROL
10dB AMP
TINT 90° SHIFTER
FSC IN
CLAMP CNC2
CLAMP CNC1
DEM90° SHIFTER
TINT CONTROL
TINT CONT. AMP
CAI LEVER CONTROL
PAL TINTOFF
DLY1-1
DLY2-1
OFFSET CANCEL1.2
CAI1
DLY 3-1
6dB AMP1
TEST SW2-1
DLY1-2
DLY2-2
OFFSET CANCEL3.4
CAI2
DLY 3-2
6dB AMP2
TEST SW2-2
CAI DET Y
CAI DET C
CAI SW CONT.
TCONT.
STCONT.
TEST SW2 CONTROL
HI:TEST MODE2
LPF Y
CAI DET CONT. (Y/C MIX)
MOD90° SHIFTER
MOD1
MIX AMP
MOD2
CNCFC2
Lo:TEST MODE3
CONTOUR CORRECT SIGNAL
CLAMP·SLICE·Sync Sepa
MMV·PULSE GEN
TEST SW3
COLOR CONTROL
COLOR CONT. AMP
YLPFADJ
DET CONT.
YIN
SLICE
HHK
BGPW
BGPP
PULSE
CCONT.
SCCONT.
C-OUT
CARI BAL2
CARI BAL1
MOD2IN

■ M52366FP 【MITSUBISHI】
(Color Signal Processer)


REC C OUT
ACC DET3
REC IN
ACC DET2
ACC OUT
ACC DET1
PBC IN
MAIN BM BYPASS
BURST UPIN
HSW IN
BURST DOWN IN
Vcc1
BURST DOWN OUT
NDLIN
IDL ADJ
IDL IN
2DL DRV
2DL ADJ
2DLIN
DOP IN
LOGIC OUT
VREF
YIN
GND
CNR IN
EE/PB /TRICK SW
CNR DL DRV
CNR DL ADJ
CHROM ACC DET
4fsc OUT
NC
fsc OUT
VCXO OUT
GND 3
VCXO IN
REC APC DET
MMV
AFC DET
VCO ADJ
KILLER DET
HSS IN
HP OUT
KILLER OUT
ROT IN
APC DET
SIDE LOOK DET
Vcc3
Vcc2
VCO LC FILTER ADJ
LIM OUT
GND
CNR OUT
2/4/6 SW
CNR DLIN
IDOFF DET
3.58M BPF
EDIT DET
ACC DET
ACC AMP
MAIN BM
BURST DOWN
ACC DET
KILLER SW
DL
LPF
CHROMA ACC DET
BURST UP
CHROMA ACC AMP
CG
POWER ON DET
BG
BGPAN GEN
X4
SUB BM
LPF
BPF
APC DET
4.2M VCO
4 PHASE
ROTARY
FILTER AUTO ADJ
CORR DET
LIM
VCXO
REC APC DET
KILLER ID DET
1/320
1/8
AFC DET
320FH VCO
MM
DMM
SIDE LOOK RESET
SIDE LOOK DET
ROT SW
TEST
V LOGOCAL
KILLER SW
LOGICAL OFF
V-REF
EQ
1+K
2
K
EE /PB /TR
CNR OFF DET
-9.5 dB
CORR CNR OFF
KILLER SW
6/4/2
EE
PB
PB2
PB SP
GND1

■ M52684AP 【MITSUBISHI】
(SYNC Separator and AFC)

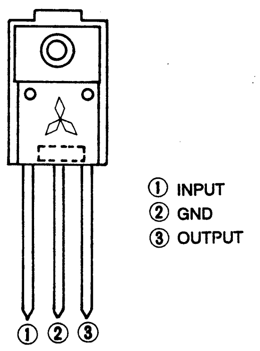

C. SYNC SEP. OUTPUT 1
GND 2
V. SYNC SEP. REF CONT. 1 3 4
V. SYNC SEP. REF CONT. 2 5
V. SYNC SEP. FILTER 6
VD OUTPUT 7
14 SYNC SEP. INPUT
13 H. OSC OUTPUT
12 H. OSC INPUT 1
11 H. OSC INPUT 2
10 Vcc
9 AFC FILTER
8 HD OUTPUT

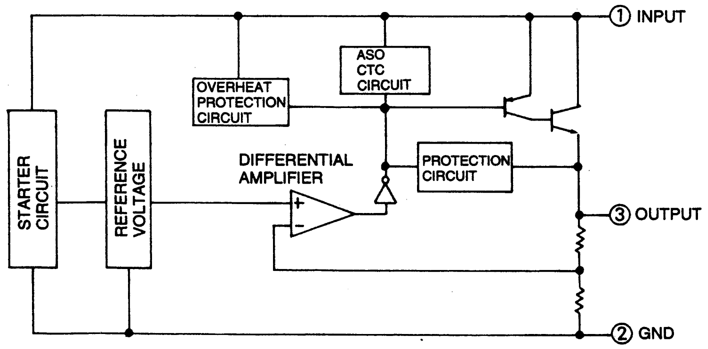

SYNC SEP. INPUT
H.OSC OUTPUT
H.OSC INPUT 1
H.OSC INPUT 2
Vcc
AFC FILTER
HD OUTPUT
H VCO 32 fH
AFC DETECTOR
H. COUNT DOWN
H. SYNC SEP.
V. SYNC SEP.
C. SYNC SEP. OUTPUT
GND
V. SYNC SEP. REF CONT 1
V. SYNC SEP. REF CONT 2
V. SYNC SEP. FILTER
VD OUTPUT

■ M5278D09 【MITSUBISHI】
(Reference M5278D05.)

■ M5278L09 【MITSUBISHI】
(Reference M5278L05.)

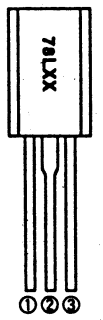
■ M5278D05 【MITSUBISHI】
(3 Terminal Positive Voltage Regulator (+5V))

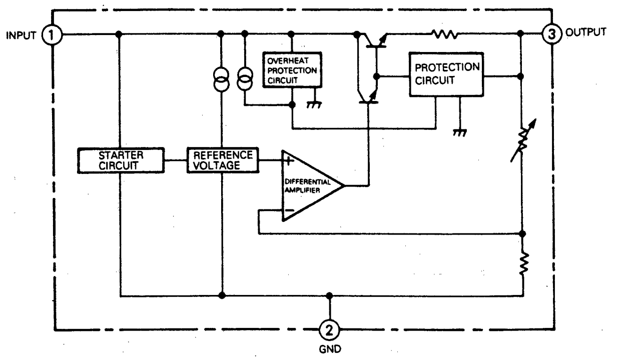

① INPUT
② GND
③ OUTPUT
①②③


① INPUT
③ OUTPUT
② GND
STARTER CIRCUIT
REFERENCE VOLTAGE
OVERHEAT PROTECTION CIRCUIT
ASO CTC CIRCUIT
DIFFERENTIAL AMPLIFIER
PROTECTION CIRCUIT

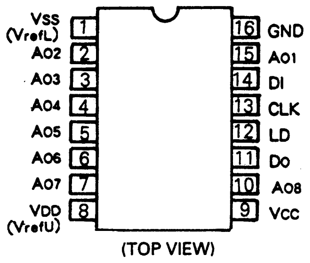
■ M5278L05 【MITSUBISHI】
(3 Terminal Negative Voltage Regulator (−5V))

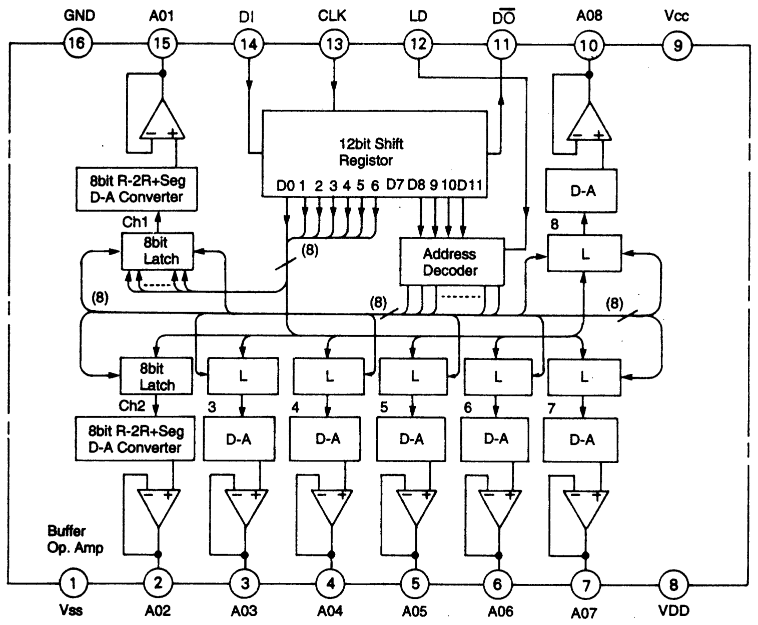
L TYPE



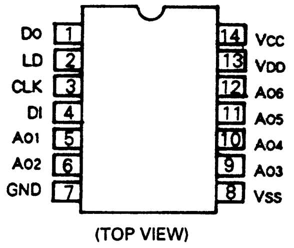

INPUT 1
3 OUTPUT
2 GND
OVERHEAT PROTECTION CIRCUIT
PROTECTION CIRCUIT
STARTER CIRCUIT
REFERENCE VOLTAGE
DIFFERENTIAL AMPLIFIER

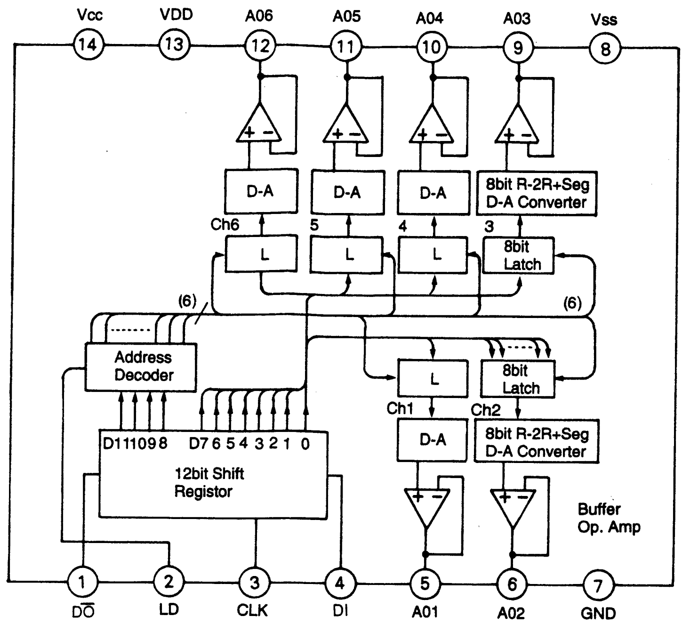
■ M62353GP 【MITSUBISHI】
(8-Bit 8-Channel D/A Converter)


Vss (VrefL) 1
AO2 2
AO3 3
AO4 4
AO5 5
AO6 6
AO7 7
VDD (VrefU) 8
16 GND
15 AO1
14 DI
13 CLK
12 LD
11 Do
10 AO8
9 Vcc
(TOP VIEW)

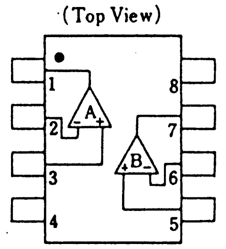

GND 16
AO1 15
DI 14
CLK 13
LD 12
DO 11
AO8 10
Vcc 9
12bit Shift Registor
D0 1 2 3 4 5 6 D7 D8 9 10 D11
8bit R-2R+Seg D-A Converter
Ch1
8bit Latch
Address Decoder
D-A
8
L
(8)
8bit Latch
Ch2
8bit R-2R+Seg D-A Converter
L
3 4 5 6 7
D-A
Buffer Op. Amp
1 Vss
2 AO2
3 AO3
4 AO4
5 AO5
6 AO6
7 AO7
8 VDD

■ M62354FP 【MITSUBISHI】
(8-Bit 6-Channel D/A Converter)

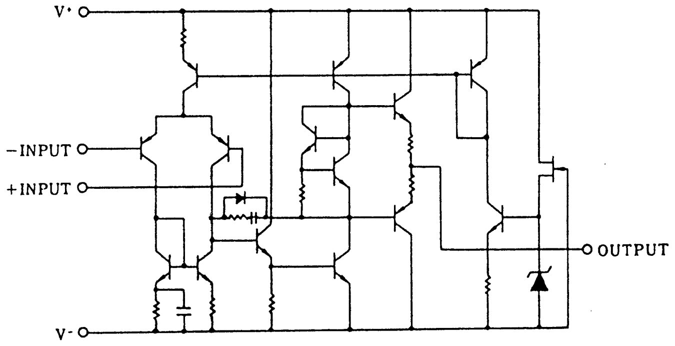

Do 1
LD 2
CLK 3
DI 4
AO1 5
AO2 6
GND 7
14 Vcc
13 VDD
12 AO6
11 AO5
10 AO4
9 AO3
8 Vss
(TOP VIEW)


Vcc 14
VDD 13
AO6 12
AO5 11
AO4 10
AO3 9
Vss 8
D-A
8bit R-2R+Seg D-A Converter
Ch6 5 4 3
L
8bit Latch
(6)
Address Decoder
D11 10 9 8 D7 6 5 4 3 2 1 0
12bit Shift Registor
L
8bit Latch
Ch1 Ch2
D-A
8bit R-2R+Seg D-A Converter
Buffer Op. Amp
1 DO
2 LD
3 CLK
4 DI
5 AO1
6 AO2
7 GND

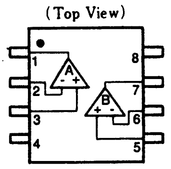
■ NJM2068MD 【JRC】
(Dual Low-Noise Op.Amp)


(Top View)
1 8
2 7
3 6
4 5
A
B

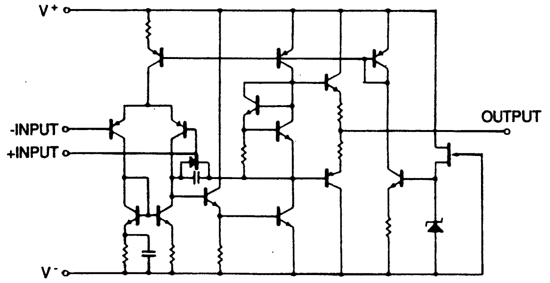
1. A OUTPUT
2. A−INPUT
3. A+INPUT
4. V⁻
5. B+INPUT
6. B−INPUT
7. B OUTPUT
8. V⁺


V⁺
−INPUT
+INPUT
OUTPUT
V⁻

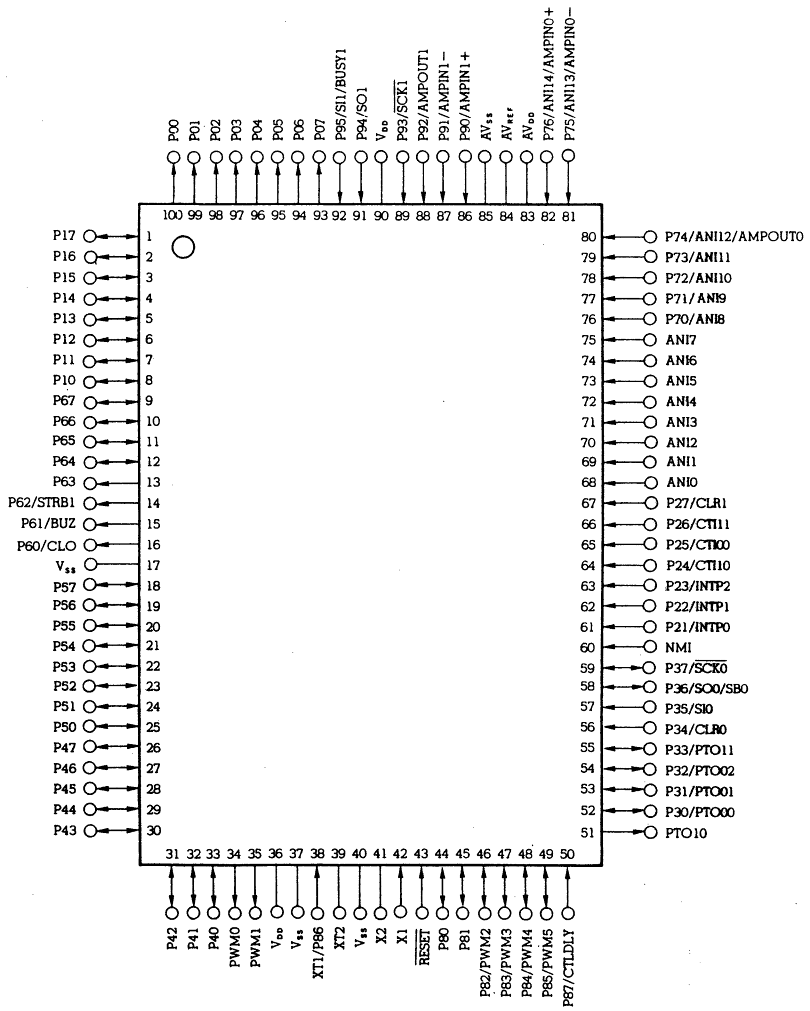
■ NJM4560D 【JRC】
(Dual Op.Amp)


(Top View)
1 8
2 7
3 6
4 5
A
B

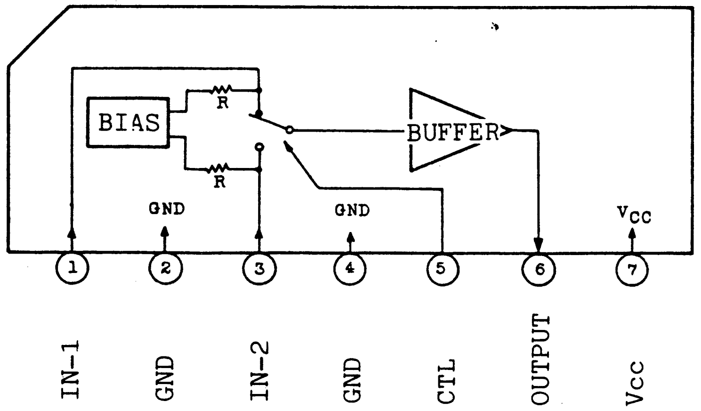
1. A OUTPUT
2. A−INPUT
3. A+INPUT
4. V⁻
5. B+INPUT
6. B−INPUT
7. B OUTPUT
8. V⁻


V⁺
-INPUT
+INPUT
OUTPUT
V⁻

■ SC78148GF-037 【JVC】
(8-Bit Micro Computer)

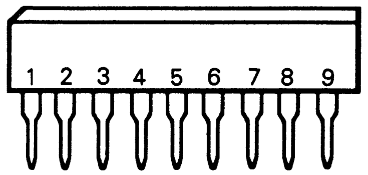

1 P17
2 P16
3 P15
4 P14
5 P13
6 P12
7 P11
8 P10
9 P67
10 P66
11 P65
12 P64
13 P63
14 P62/STRB1
15 P61/BUZ
16 P60/CLO
17 Vss
18 P57
19 P56
20 P55
21 P54
22 P53
23 P52
24 P51
25 P50
26 P47
27 P46
28 P45
29 P44
30 P43
31 P42
32 P41
33 P40
34 PWM0
35 PWM1
36 VDD
37 Vss
38 XT1/P86
39 XT2
40 Vss
41 X2
42 X1
43 RESET
44 P80
45 P81
46 P82/PWM2
47 P83/PWM3
48 P84/PWM4
49 P85/PWM5
50 P87/CTLDLY
51 PTO10
52 P30/PTO00
53 P31/PTO01
54 P32/PTO02
55 P33/PTO11
56 P34/CLR0
57 P35/SI0
58 P36/SO0/SB0
59 P37/SCK0
60 NMI
61 P21/INTP0
62 P22/INTP1
63 P23/INTP2
64 P24/CTI10
65 P25/CTI00
66 P26/CTI11
67 P27/CLR1
68 ANI0
69 ANI1
70 ANI2
71 ANI3
72 ANI4
73 ANI5
74 ANI6
75 ANI7
76 P70/ANI8
77 P71/ANI9
78 P72/ANI10
79 P73/ANI11
80 P74/ANI12/AMPOUT0
81 P75/ANI13/AMPIN0−
82 P76/ANI14/AMPIN0+
83 AVDD
84 AVREF
85 AVss
86 P90/AMPIN1+
87 P91/AMPIN1−
88 P92/AMPOUT1
89 P93/SCK1
90 VDD
91 P94/SO1
92 P95/SI1/BUSY1
93 P07
94 P06
95 P05
96 P04
97 P03
98 P02
99 P01
100 P00

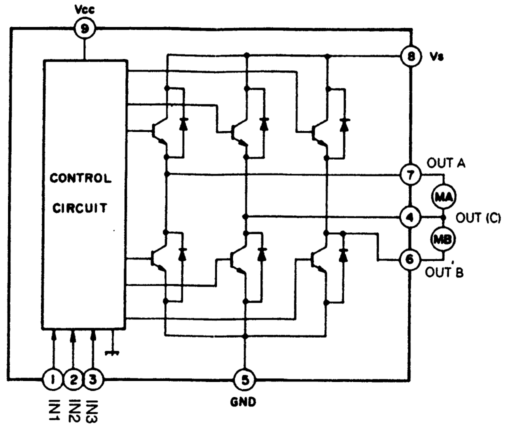
■ TA7347P 【TOSHIBA】
(2-Input Switch)


BIAS
R
R
BUFFER
GND
GND
Vcc
1 IN-1
2 GND
3 IN-2
4 GND
5 CTL
6 OUTPUT
7 Vcc

4-75

■ TA8405S 【TOSHIBA】
(DC Motor Driver)



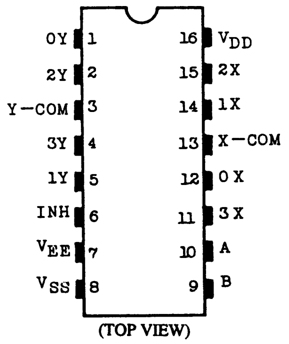

Vcc
9
8 Vs
CONTROL CIRCUIT
7 OUT A
MA
4 OUT (C)
MB
6 OUT B
1 2 3
IN1 IN2 IN3
5 GND

TRUTH TABLE

INPUT			INPUT			MODE	
IN 1	IN 2	IN 3	OUT (C)	OUT A	OUT B	MA	MB
0	0	1/0	*	*	*	STOP	STOP
1	0	0	H	L	*	CW/CCW	STOP
1	0	1	L	H	*	CCW/CW	STOP
0	1	0	H	*	L	STOP	CW/CCW
0	1	1	L	*	H	STOP	CCW/CW
1	1	1/0	L	L	L	BRAKE	BRAKE

*: High Impedance

■ TC4052BF 【TOSHIBA】
(Dual 4 Channel Analog Multiplexers/ Demultiplexers)


0Y 1
2Y 2
Y−COM 3
3Y 4
1Y 5
INH 6
VEE 7
VSS 8
16 VDD
15 2X
14 1X
13 X−COM
12 0X
11 3X
10 A
9 B

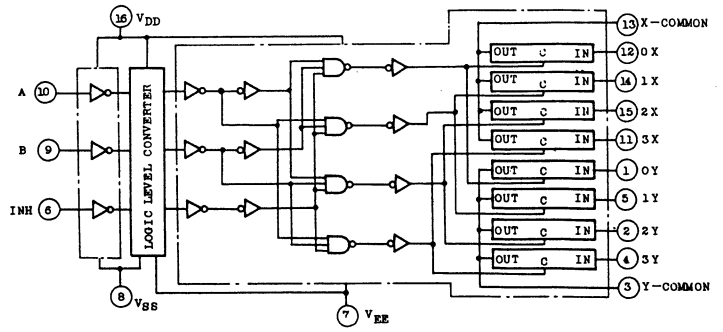
(TOP VIEW)

TRUTH TABLE

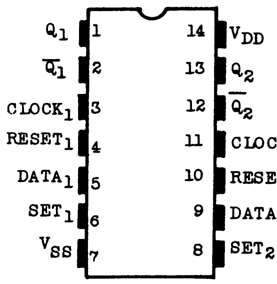
CONTROL INPUTS			"ON" CHANNEL
INHIBIT	B	A	TC4052BP TC4052BF
L	L	L	0X、0Y
L	L	H	1X、1Y
L	H	L	2X、2Y
L	H	H	3X、3Y
L	L	L	—
L	L	H	—
L	H	L	—
L	H	H	—
H	※	※	NONE

※ Don' t Care

LOGIC DIAGRAM

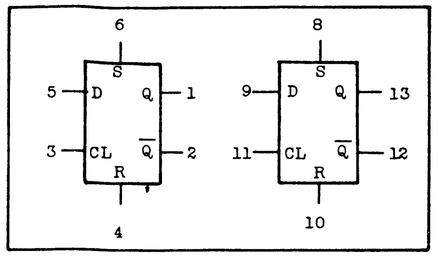

16 VDD
A 10
B 9
INH 6
LOGIC LEVEL CONVERTER
OUT C IN
13 X−COMMON
12 0X
14 1X
15 2X
11 3X
1 0Y
5 1Y
2 2Y
4 3Y
3 Y−COMMON
8 VSS
7 VEE

■ TC4013BF 【TOSHIBA】
(Dual D−Type Flip Flop)


Q1 1
Q̄1 2
CLOCK1 3
RESET1 4
DATA1 5
SET1 6
VSS 7
14 VDD
13 Q2
12 Q̄2
11 CLOCK2
10 RESET2
9 DATA2
8 SET2

(TOP VIEW)

BLOCK DIAGRAM


6
8
S
5 D Q 1
3 CL Q̄ 2
R
4
9 D Q 13
11 CL Q̄ 12
R
10

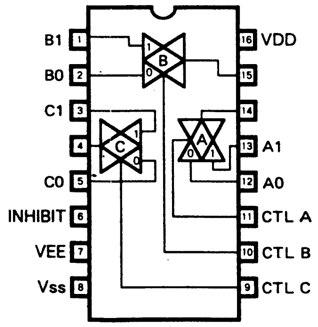
TRUTH TABLE

INPUTS				OUTPUTS	
RESET	SET	DATA	CLOCK △	Qn+1	Q̄n+1
L	H	✱	✱	H	L
H	L	✱	✱	L	H
H	H	✱	✱	H	H
L	L	L	_⌐	L	H
L	L	H	_⌐	H	L
L	L	✱	¬_	Qn•	Q̄n•

✱ : Don't Care
△ : Level Change
• : No Change

■ TC4052BP 【TOSHIBA】
(Reference TC4052BF.)

■ TC4053BF 【TOSHIBA】
(Triple 2 Channel Analog Multiplexers/ Demultiplexers)


B1 1
B0 2
C1 3
4
C0 5
INHIBIT 6
VEE 7
Vss 8
16 VDD
15
14
13 A1
12 A0
11 CTL A
10 CTL B
9 CTL C
B
C
A

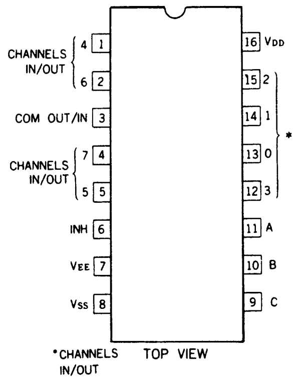
(TOP VIEW)

TRUTH TABLE

CONTROL INPUTS				"ON" CHANNEL
INHIBIT	C△	B	A	4053BP 4053BF
L	L	L	L	0X, 0Y, 0Z
L	L	L	H	1X, 0Y, 0Z
L	L	H	L	0X, 1Y, 0Z
L	L	H	H	1X, 1Y, 0Z
L	H	L	L	0X, 0Y, 1Z
L	H	L	H	1X, 0Y, 1Z
L	H	H	L	0X, 1Y, 1Z
L	H	H	H	1X, 1Y, 1Z
H	*	*	*	NOTE

* Don't Care.

■ TC4051BF 【TOSHIBA】
(Single 8 Channel Analog Multiplexers/ Demultiplexers)

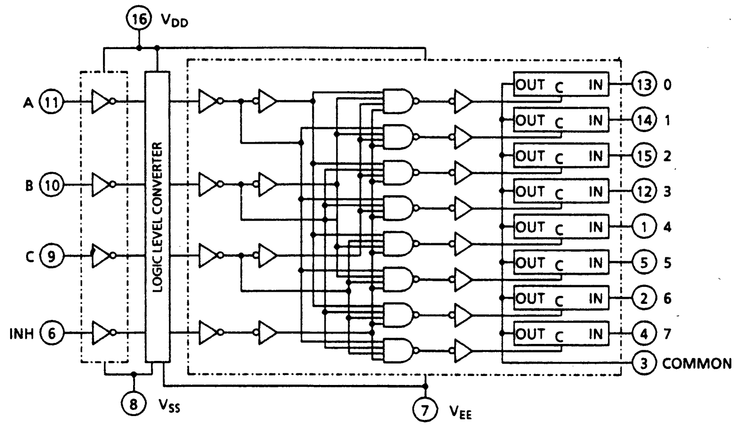

CHANNELS IN/OUT
4 1
6 2
COM OUT/IN 3
CHANNELS IN/OUT
7 4
5 5
INH 6
VEE 7
Vss 8
16 VDD
15 2
14 1
13 0
12 3
11 A
10 B
9 C
*
*CHANNELS IN/OUT
TOP VIEW

TRUTH TABLE

CONTROL INPUTS				"ON" CHANNEL
INHIBIT	C△	B	A	4051
L	L	L	L	0
L	L	L	H	1
L	L	H	L	2
L	L	H	H	3
L	H	L	L	4
L	H	L	H	5
L	H	H	L	6
L	H	H	H	7
H	※	※	※	NONE

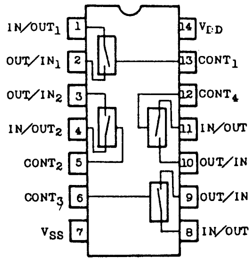
※ Don' t Care.

LOGIC DIAGRAM


16 VDD
A 11
B 10
C 9
INH 6
LOGIC LEVEL CONVERTER
OUT C IN
13 0
14 1
15 2
12 3
1 4
5 5
2 6
4 7
3 COMMON
8 Vss
7 VEE

■ TC4053BP 【TOSHIBA】
(Reference TC4053BF.)

■ TC4066BP 【TOSHIBA】
(Quad Bilateral Switch)

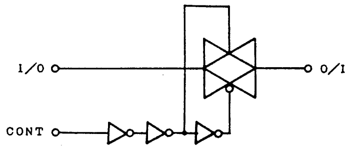

IN/OUT1 1
OUT/IN1 2
OUT/IN2 3
IN/OUT2 4
CONT2 5
CONT3 6
VSS 7
14 VDD
13 CONT1
12 CONT4
11 IN/OUT4
10 OUT/IN4
9 OUT/IN3
8 IN/OUT3

(TOP VIEW)

TRUTH TABLE

CONTROL	Impedance Between IN/OUT-OUT/IN ※
H	0.5~5×10²Ω
L	>10⁹Ω

LOGIC DIAGRAM



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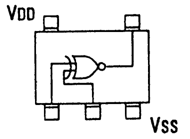
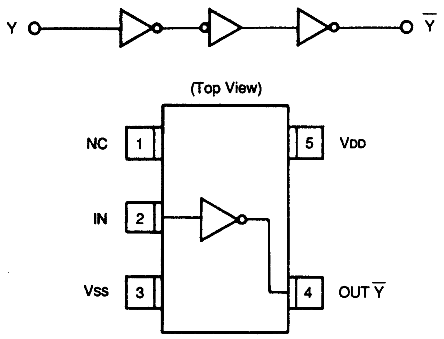
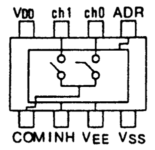
■ TC4S30F 【TOSHIBA】
(Single Exclusive OR Gate)



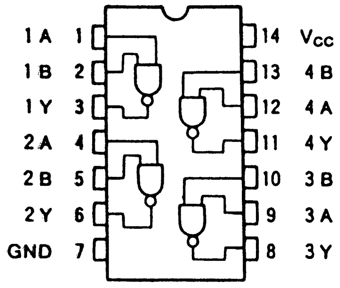
■ TC4S69F 【TOSHIBA】
(Inverter Gate)


Y
Ȳ
(Top View)
NC 1
IN 2
Vss 3
5 VDD
4 OUT Ȳ

■ TC4W53F 【TOSHIBA】
(Multiplexer)


VDD ch1 ch0 ADR
COM INH VEE VSS

■ TC74HC00AF 【TOSHIBA】
(Quad 2-Input NAND Gates)

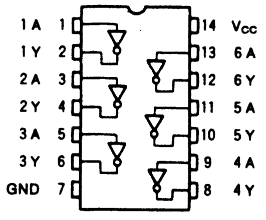

1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 Vcc
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

(TOP VIEW)

TRUE Table

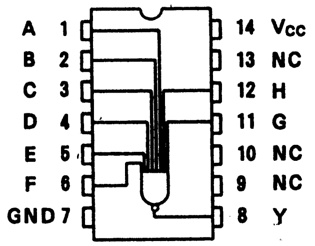
A	B	Y
L	L	H
L	H	H
H	L	H
H	H	L

■ TC74HC04AF 【TOSHIBA】
(Hex Inverters)


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

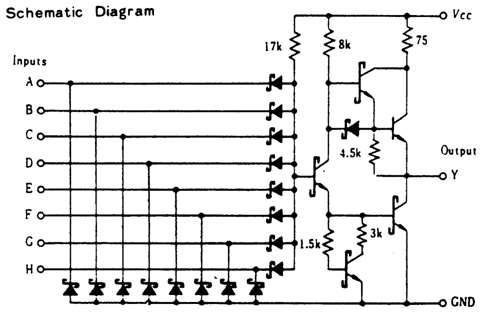
(TOP VIEW)

■ TC74HC30AF 【TOSHIBA】
(8-Input NAND Gates)


A 1
B 2
C 3
D 4
E 5
F 6
GND 7
14 Vcc
13 NC
12 H
11 G
10 NC
9 NC
8 Y

(TOP VIEW)

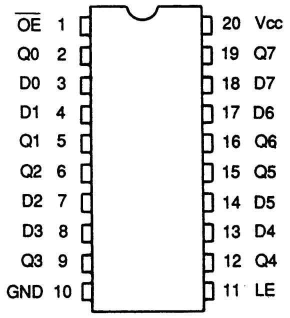
NC:No Connection


Schematic Diagram
Inputs
A
B
C
D
E
F
G
H
17k
8k
75
Vcc
4.5k
Output
Y
1.5k
3k
GND

TRUE Table

INPUTS								OUTPUTS
A	B	C	D	E	F	G	H	
H	H	H	H	H	H	H	H	L
L	X	X	X	X	X	X	X	H
X	L	X	X	X	X	X	X	H
X	X	L	X	X	X	X	X	H
X	X	X	L	X	X	X	X	H
X	X	X	X	L	X	X	X	H
X	X	X	X	X	L	X	X	H
X	X	X	X	X	X	L	X	H

■ TC74HC373AF 【TOSHIBA】
(Octal D-Type Latch With NON-Inverted 3-State Output)

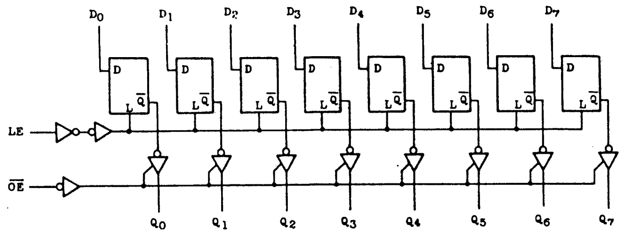

$\overline{OE}$ 1
Q0 2
D0 3
D1 4
Q1 5
Q2 6
D2 7
D3 8
Q3 9
GND 10
20 Vcc
19 Q7
18 D7
17 D6
16 Q6
15 Q5
14 D5
13 D4
12 Q4
11 LE

(Top View)

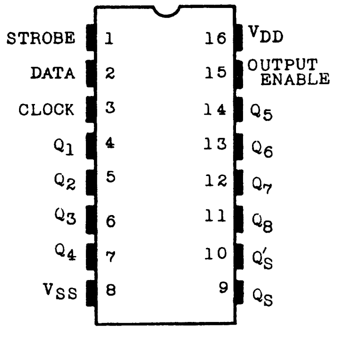
TRUE Table

INPUTS			OUTPUTS
$\overline{OE}$	LE	D	
H	X	X	Z
L	L	X	Q_n
L	H	L	L
L	H	H	H

X : Don't Care
Z : Hi impedance
Qn : Q output level before the LE become "L".


D_0
D_1
D_2
D_3
D_4
D_5
D_6
D_7
D
L
$\overline{Q}$
LE
$\overline{OE}$
Q_0
Q_1
Q_2
Q_3
Q_4
Q_5
Q_6
Q_7

■ TC74HC4094AF 【TOSHIBA】
(8 Stage Bus Compatible Shift/Store Register)

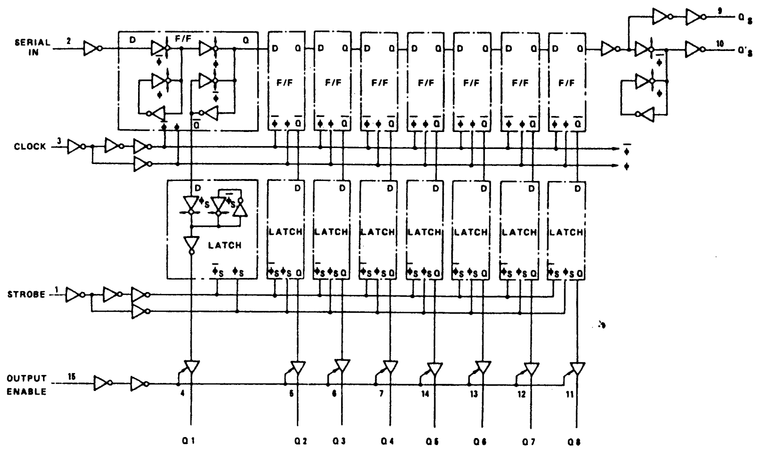

STROBE 1
DATA 2
CLOCK 3
Q_1 4
Q_2 5
Q_3 6
Q_4 7
V_{SS} 8
16 V_{DD}
15 OUTPUT ENABLE
14 Q_5
13 Q_6
12 Q_7
11 Q_8
10 Q'_S
9 Q_S

(TOP VIEW)

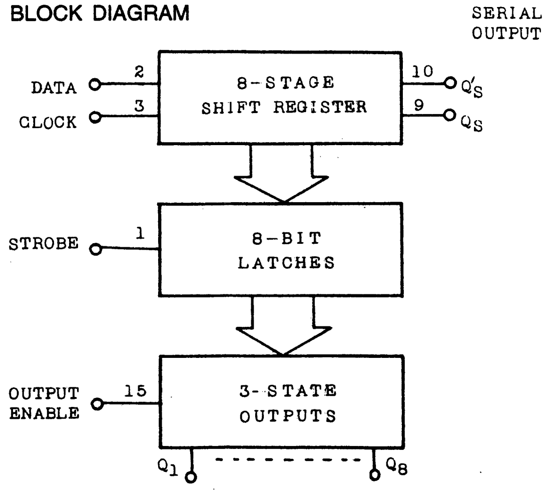
TRUTH TABLE

CL	OE	ST	D	PO		SO	
				Q_1	Q_n	Q_S	Q'_S
↑	H	H	L	L	Q_{n-1}	Q_7	NC
↑	H	H	H	H	Q_{n-1}	Q_7	NC
↑	H	L	✱	NC	NC	Q_7	NC
↑	L	✱	✱	HZ	HZ	Q_7	NC
↓	H	✱	✱	NC	NC	NC	Q_S
↓	L	✱	✱	HZ	HZ	NC	Q_S

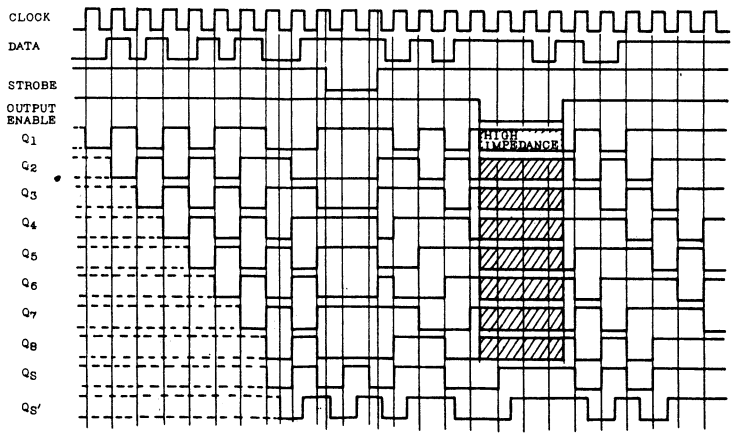
CL = Clock
OE = Output Enable
ST = Strobe
D = Data
PO = Parallel Outputs
SO = Serial Output
✱ = Don't care
NC = No Change
HZ = High Impedance


SERIAL IN
2
D
F/F
CLOCK
3
LATCH
STROBE
1
OUTPUT ENABLE
15
Q_S
Q'_S
9
10
4
5
6
7
14
13
12
11
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8

BLOCK DIAGRAM


SERIAL OUTPUT
DATA
2
CLOCK
3
8-STAGE SHIFT REGISTER
10
Q'_S
9
Q_S
STROBE
1
8-BIT LATCHES
OUTPUT ENABLE
15
3-STATE OUTPUTS
Q_1
Q_8

PARALLEL OUTPUTS



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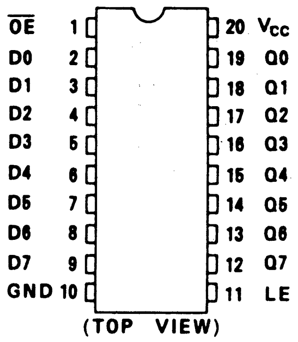
■ TC74HC573AF 【TOSHIBA】
(Octal D-Type Latch With NON-Inverted 3-State Outputs)

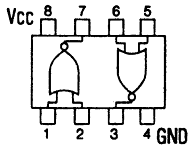

OE 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
GND 10
20 Vcc
19 Q0
18 Q1
17 Q2
16 Q3
15 Q4
14 Q5
13 Q6
12 Q7
11 LE
(TOP VIEW)

TRUE Table

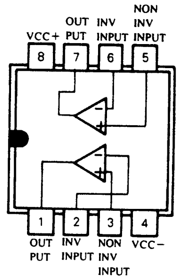
INPUTS			OUTPUTS
OE	LE	D	Q
H	X	X	HZ
L	L	X	Q_n
L	H	L	L
L	H	H	H

X : Don't care.
Z : Hi impedance
Qn : Level of Q output before LE becomes "L".

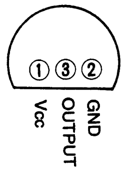
■ TC7W02F 【TOSHIBA】
(2 Input Dual NOR Gate)


Vcc 8
7
6
5
1
2
3
4 GND

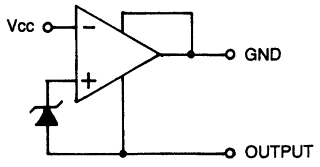
■ TL082CPS 【TEXAS】
(JG OR P Dual-In-Line Package)


VCC+
OUT PUT
INV INPUT
NON INV INPUT
8
7
6
5
1
2
3
4
OUT PUT
INV INPUT
NON INV INPUT
VCC−

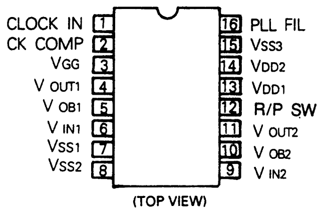
■ TL431CLP 【TOSHIBA】
(Voltage Regulator)

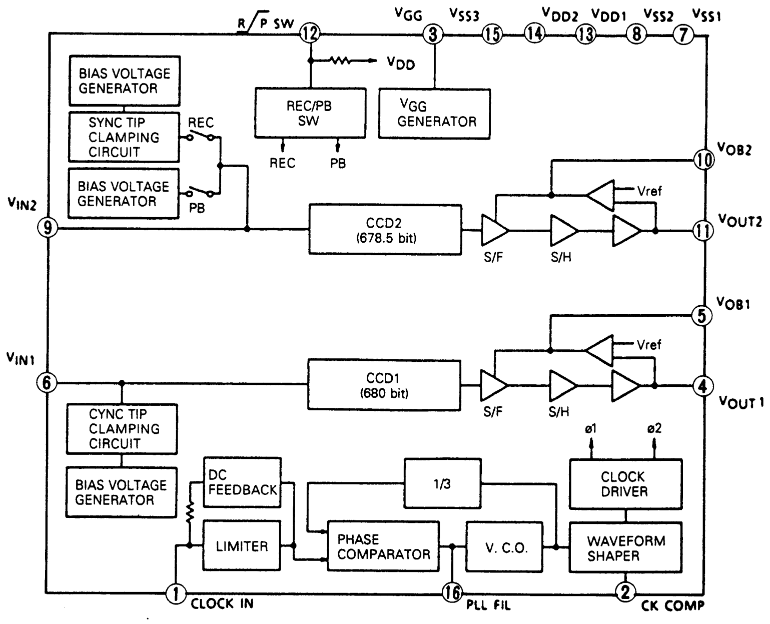

① ③ ②
Vcc
OUTPUT
GND

(TOP VIEW)

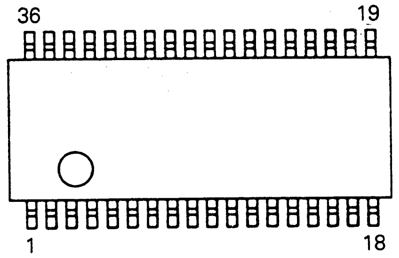

Vcc
GND
OUTPUT

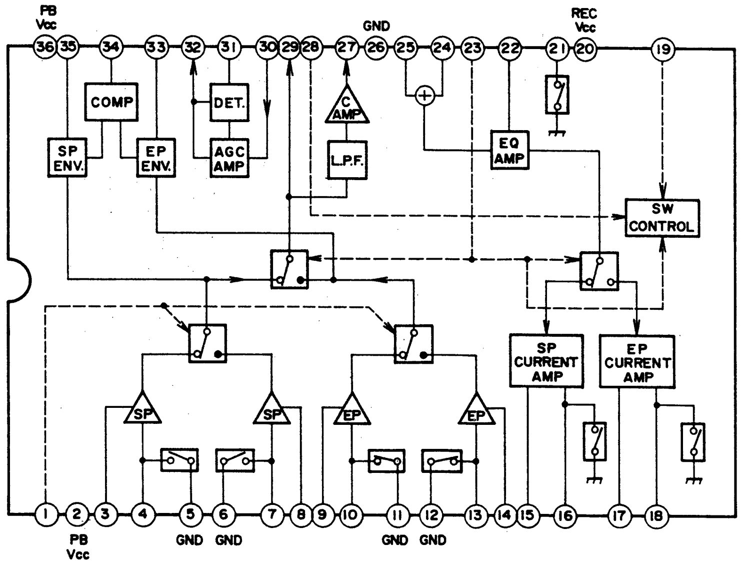
■ TL8825F-XE 【TOSHIBA】
(1H CCD Delay Line VTR For NTSC)


CLOCK IN 1
CK COMP 2
VGG 3
V OUT1 4
V OB1 5
V IN1 6
VSS1 7
VSS2 8
16 PLL FIL
15 VSS3
14 VDD2
13 VDD1
12 R/P SW
11 V OUT2
10 V OB2
9 V IN2
(TOP VIEW)

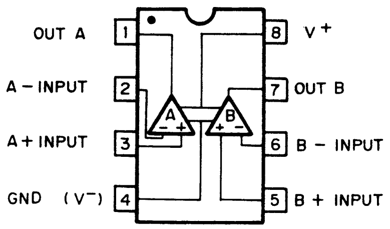

R/P SW ⑫
VGG ③
VSS3 ⑮
VDD2 ⑭
VDD1 ⑬
VSS2 ⑧
VSS1 ⑦
VDD
BIAS VOLTAGE GENERATOR
SYNC TIP CLAMPING CIRCUIT
REC
BIAS VOLTAGE GENERATOR
PB
REC/PB SW
REC
PB
VGG GENERATOR
VOB2 ⑩
VIN2 ⑨
CCD2 (678.5 bit)
S/F
S/H
Vref
VOUT2 ⑪
VOB1 ⑤
VIN1 ⑥
CCD1 (680 bit)
S/F
S/H
Vref
VOUT1 ④
CYNC TIP CLAMPING CIRCUIT
BIAS VOLTAGE GENERATOR
DC FEEDBACK
LIMITER
1/3
PHASE COMPARATOR
V. C. O.
ø1
ø2
CLOCK DRIVER
WAVEFORM SHAPER
① CLOCK IN
⑯ PLL FIL
② CK COMP

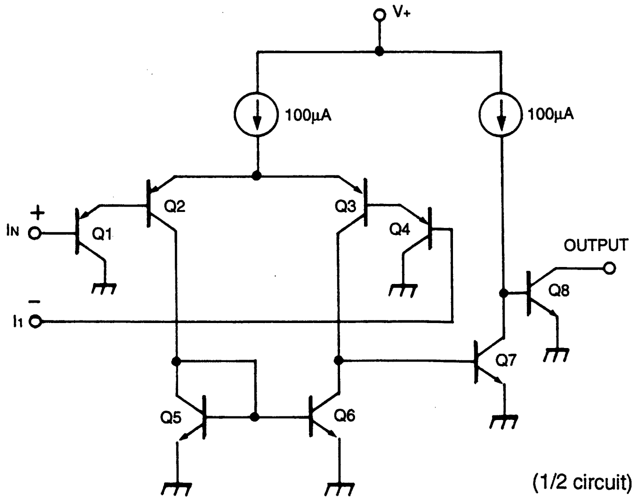
■ UPC2320GS 【NEC】
(Head Amp.)




PB Vcc
36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19
GND
REC Vcc
COMP
DET.
C AMP
SP ENV.
EP ENV.
AGC AMP
L.P.F.
EQ AMP
SW CONTROL
SP CURRENT AMP
EP CURRENT AMP
SP
SP
EP
EP
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
PB Vcc
GND GND
GND GND

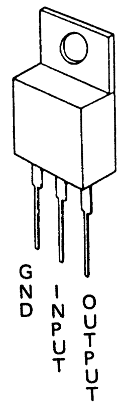
■ UPC393C 【NEC】
(Dual Comparator)

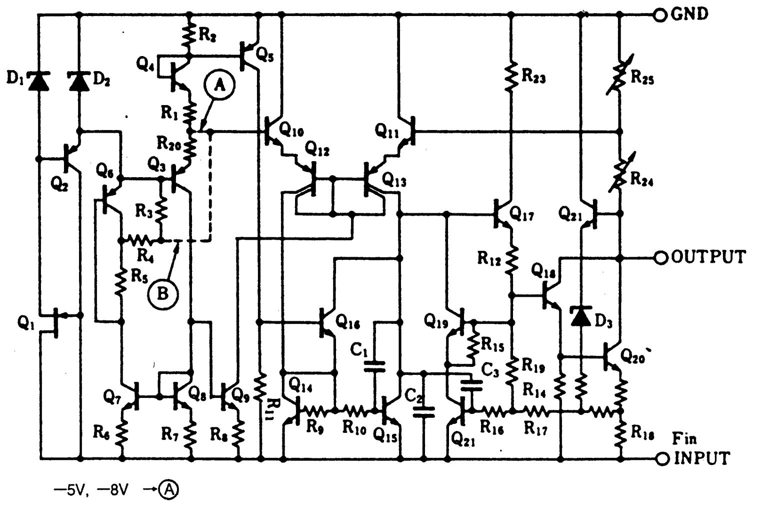

OUT A 1
A − INPUT 2
A + INPUT 3
GND (V⁻) 4
8 V⁺
7 OUT B
6 B − INPUT
5 B + INPUT
A
B


V+
100µA
100µA
IN +
−
I1
Q1
Q2
Q3
Q4
OUTPUT
Q8
Q7
Q5
Q6

(1/2 circuit)

■ UPC7912HF 【NEC】
(3-Terminal Negative Voltage Regulator (−12V))


GND
INPUT
OUTPUT

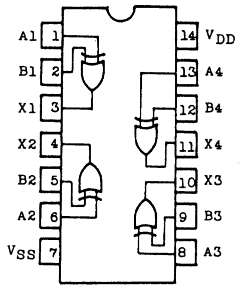

GND
OUTPUT
Fin INPUT
D1
D2
D3
Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21
R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R14 R15 R16 R17 R18 R19 R20 R23 R24 R25
C1 C2 C3
Ⓐ
Ⓑ

−5V, −8V →Ⓐ

−12V, −15V, −18V, −24V →Ⓑ

■ UPD4013BG 【NEC】
(Reference TC4013BF.)

■ UPD4030BG 【NEC】
(Quad 2 Input Exclusive OR Gate)



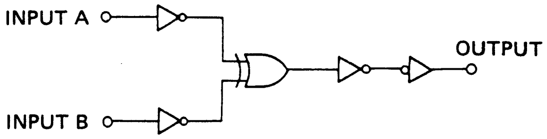
A1 1
B1 2
X1 3
X2 4
B2 5
A2 6
VSS 7
14 VDD
13 A4
12 B4
11 X4
10 X3
9 B3
8 A3

TOP VIEW

TRUTH TABLE

INPUT		OUTPUT
A	B	X
L	L	L
L	H	H
H	L	H
H	H	L

BLOCK DIAGRAM



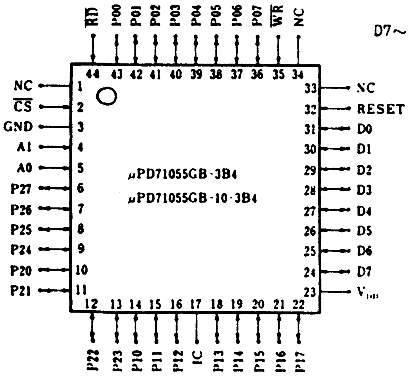
INPUT A
INPUT B
OUTPUT

■ UPD4053BG 【NEC】
(Reference TC4053BF.)

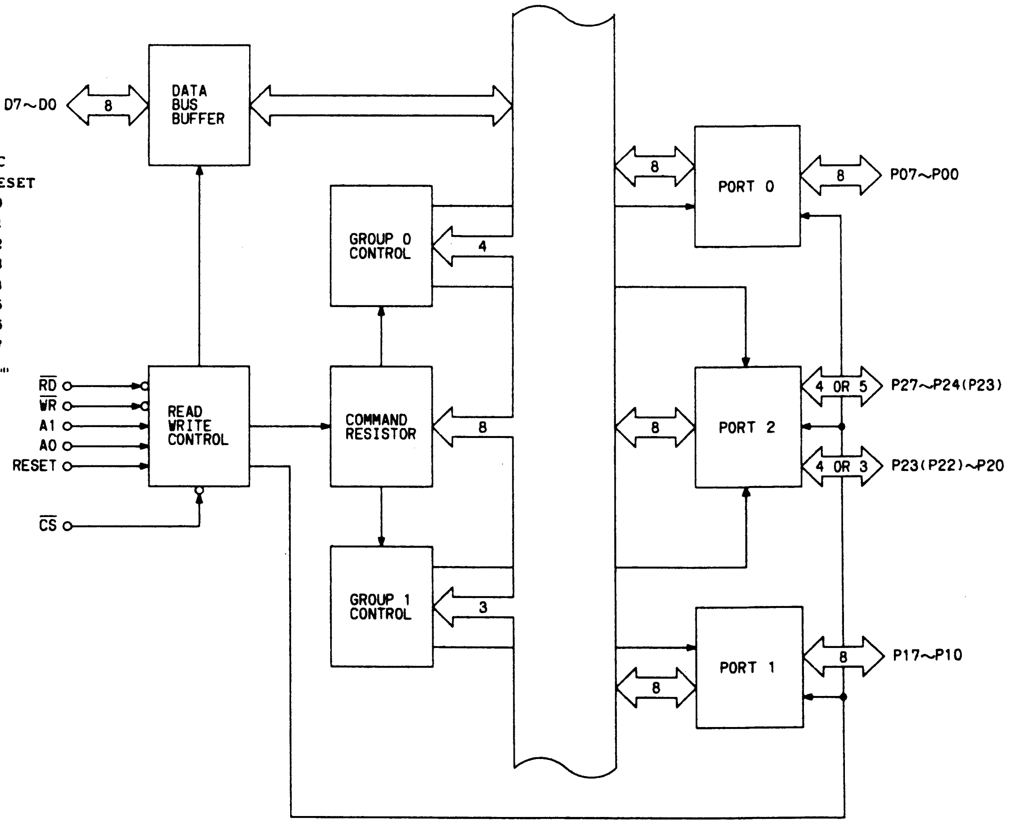
■ UPD4066BG 【NEC】
(Reference TC4066BP.)

■ UPD74HC04G 【NEC】
(Reference TC74HC04AF.)

■ UPD71055GB 【NEC】
(Parallel Input/Output Port)

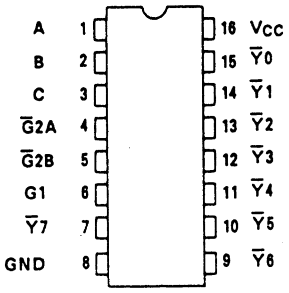


RD 44
P00 43
P01 42
P02 41
P03 40
P04 39
P05 38
P06 37
P07 36
WR 35
NC 34
NC 1
CS 2
GND 3
A1 4
A0 5
P27 6
P26 7
P25 8
P24 9
P20 10
P21 11
μPD71055GB-3B4
μPD71055GB-10-3B4
33 NC
32 RESET
31 D0
30 D1
29 D2
28 D3
27 D4
26 D5
25 D6
24 D7
23 VDD
P22 12
P23 13
P10 14
P11 15
P12 16
IC 17
P13 18
P14 19
P15 20
P16 21
P17 22



D7~D0
8
DATA BUS BUFFER
GROUP 0 CONTROL
4
RD
WR
A1
A0
RESET
CS
READ WRITE CONTROL
COMMAND RESISTOR
8
GROUP 1 CONTROL
3
8
PORT 0
8
P07~P00
8
PORT 2
4 OR 5
P27~P24(P23)
4 OR 3
P23(P22)~P20
8
PORT 1
8
P17~P10

■ UPD74HC138G 【NEC】
(3-Line to 8-Line Decoders/ Demultiplexers)



A 1
B 2
C 3
$\overline{G}$2A 4
$\overline{G}$2B 5
G1 6
$\overline{Y}$7 7
GND 8
16 Vcc
15 $\overline{Y}$0
14 $\overline{Y}$1
13 $\overline{Y}$2
12 $\overline{Y}$3
11 $\overline{Y}$4
10 $\overline{Y}$5
9 $\overline{Y}$6

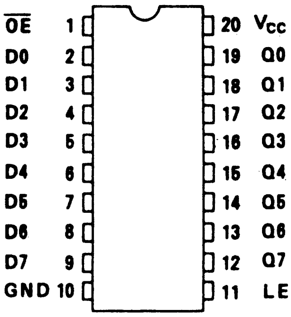
(TOP VIEW)

TRUE Table

INPUTS						OUTPUTS								SELECTED OUTPUT
ENABLE			SELECT											
G1	$\overline{G}$2A	$\overline{G}$2B	C	B	A	$\overline{Y}$0	$\overline{Y}$1	$\overline{Y}$2	$\overline{Y}$3	$\overline{Y}$4	$\overline{Y}$5	$\overline{Y}$6	$\overline{Y}$7	
L	X	X	X	X	X	H	H	H	H	H	H	H	H	NONE
X	H	X	X	X	X	H	H	H	H	H	H	H	H	NONE
X	X	H	X	X	X	H	H	H	H	H	H	H	H	NONE
H	L	L	L	L	L	L	H	H	H	H	H	H	H	$\overline{Y}$0
H	L	L	L	L	H	H	L	H	H	H	H	H	H	$\overline{Y}$1
H	L	L	L	H	L	H	H	L	H	H	H	H	H	$\overline{Y}$2
H	L	L	L	H	H	H	H	H	L	H	H	H	H	$\overline{Y}$3
H	L	L	H	L	L	H	H	H	H	L	H	H	H	$\overline{Y}$4
H	L	L	H	L	H	H	H	H	H	H	L	H	H	$\overline{Y}$5
H	L	L	H	H	L	H	H	H	H	H	H	L	H	$\overline{Y}$6
H	L	L	H	H	H	H	H	H	H	H	H	H	L	$\overline{Y}$7

X : DONT' CARE

■ UPD74HC573GS 【NEC】
(Octal D-Type Latch With NON-Inverted 3-State Outputs)



$\overline{OE}$ 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
GND 10
20 Vcc
19 Q0
18 Q1
17 Q2
16 Q3
15 Q4
14 Q5
13 Q6
12 Q7
11 LE

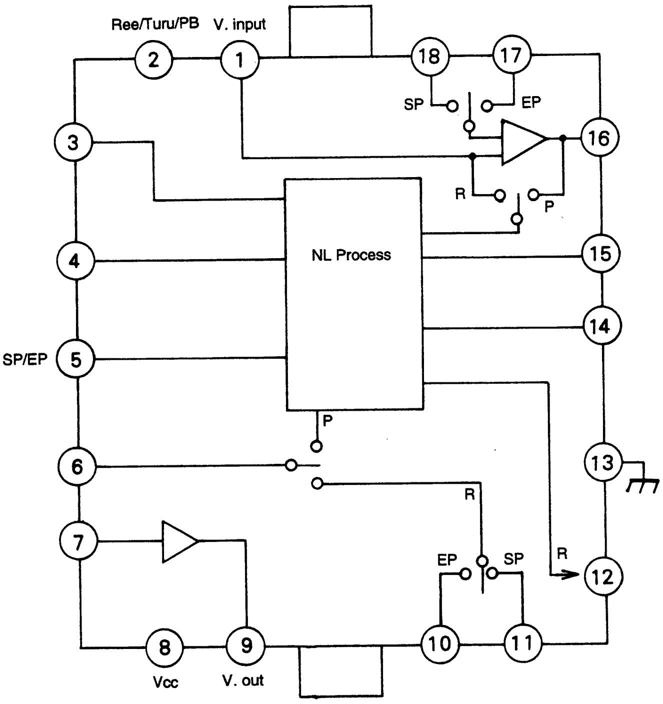
(TOP VIEW)

TRUE Table

INPUTS			OUTPUTS
$\overline{OE}$	LE	D	Q
H	X	X	HZ
L	L	X	Q_n
L	H	L	L
L	H	H	H

X : Don't care.
Z : Hi impedance
Q_n : Level of Q output before LE becomes "L".

■ VC2076MP-XE 【JVC】
(FM Signal Processer)



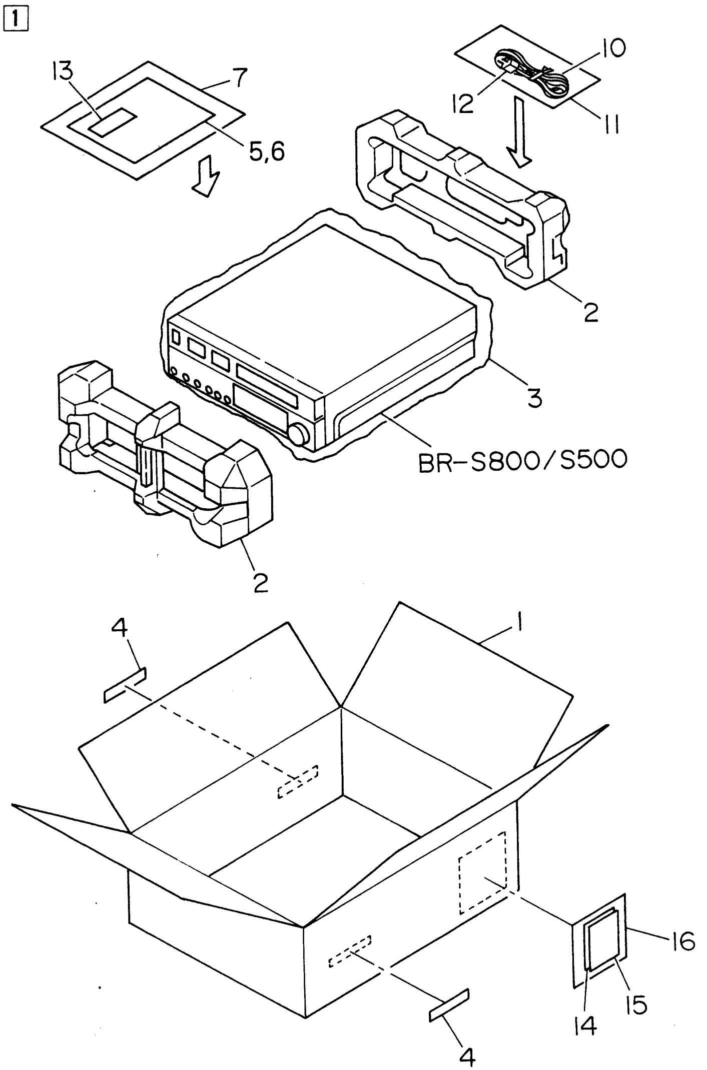
Ree/Turu/PB
V. input
2
1
18
17
SP
EP
3
16
R
P
NL Process
4
15
14
SP/EP
5
P
6
13
R
7
R
EP
SP
12
8
9
10
11
Vcc
V. out

SECTION 5
EXPLODED VIEWS AND PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING assembly M 1

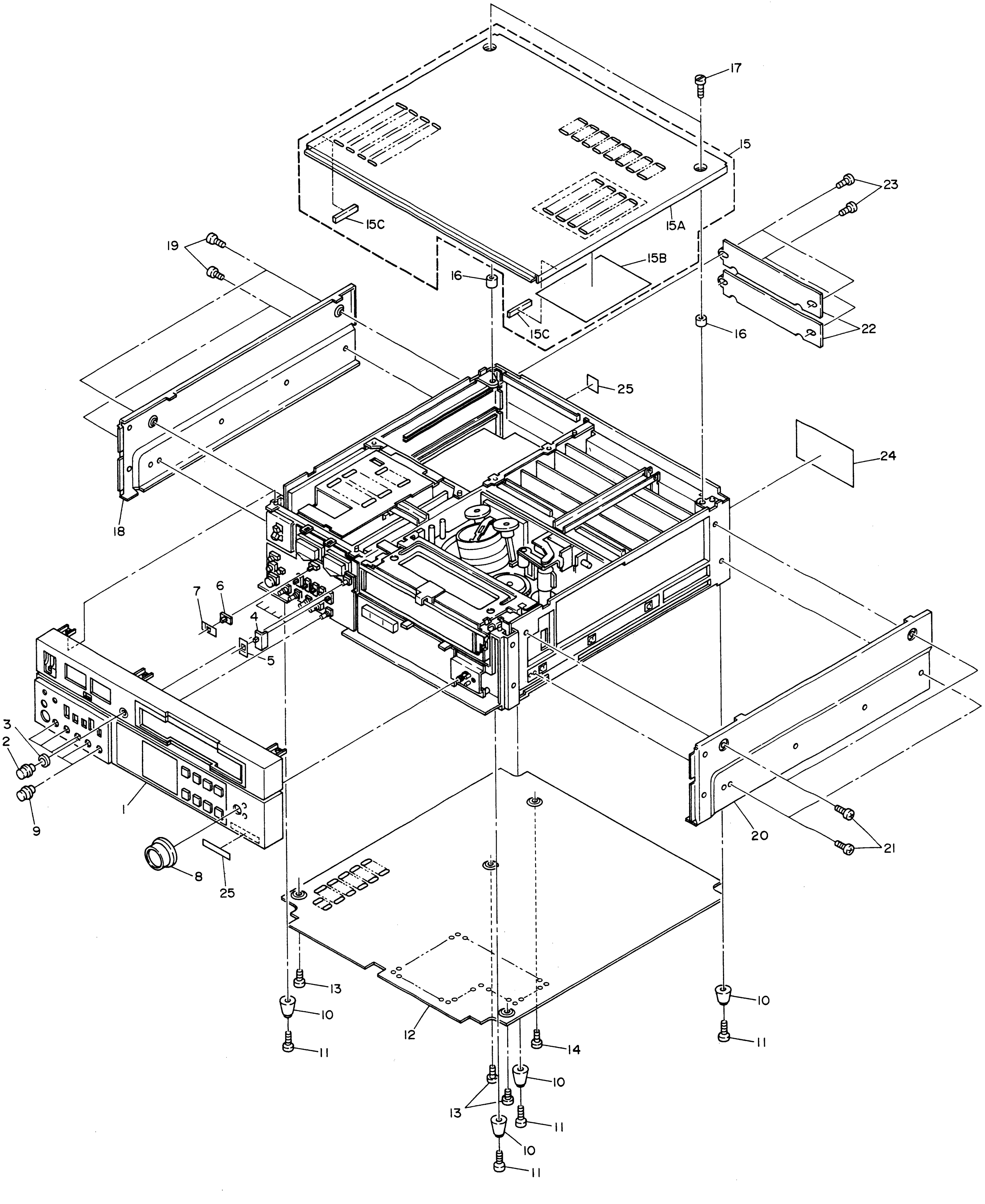


PACKING ASSEMBLY M 1

M 1 M M ☐ ☐ ☐ ☐

⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	1	PRD20487-03-03	PACKING CASE, BR-S800
	1	PRD20487-04-03	PACKING CASE, BR-S500
	2	PRD10321A	CUSHION ASSY
	3	PUM30021-24	POLY BAG
	4	PRD43892	LABEL, ×2(PACKING)
⚠	5	PGD30002-440-01	INSTRUCTIONS
	6	SL96005	CTL TC GUIDE SHEET
	7	QPGA025-03505	POLY BAG
⚠	10	QMP9003-022	POWER CORD
	11	QPGB020-02804	POLY BAG
	12	PUP40003-7	AIR CAP
⚠	13	PU33941-3-3	SAFETY GUIDE
	14	BT-20103A	WARRANTY CARD
	15	BT-20104A	TOLL FREE CARD
	16	PU54821	POLY BAG

5.2 CABINET assembly M 2

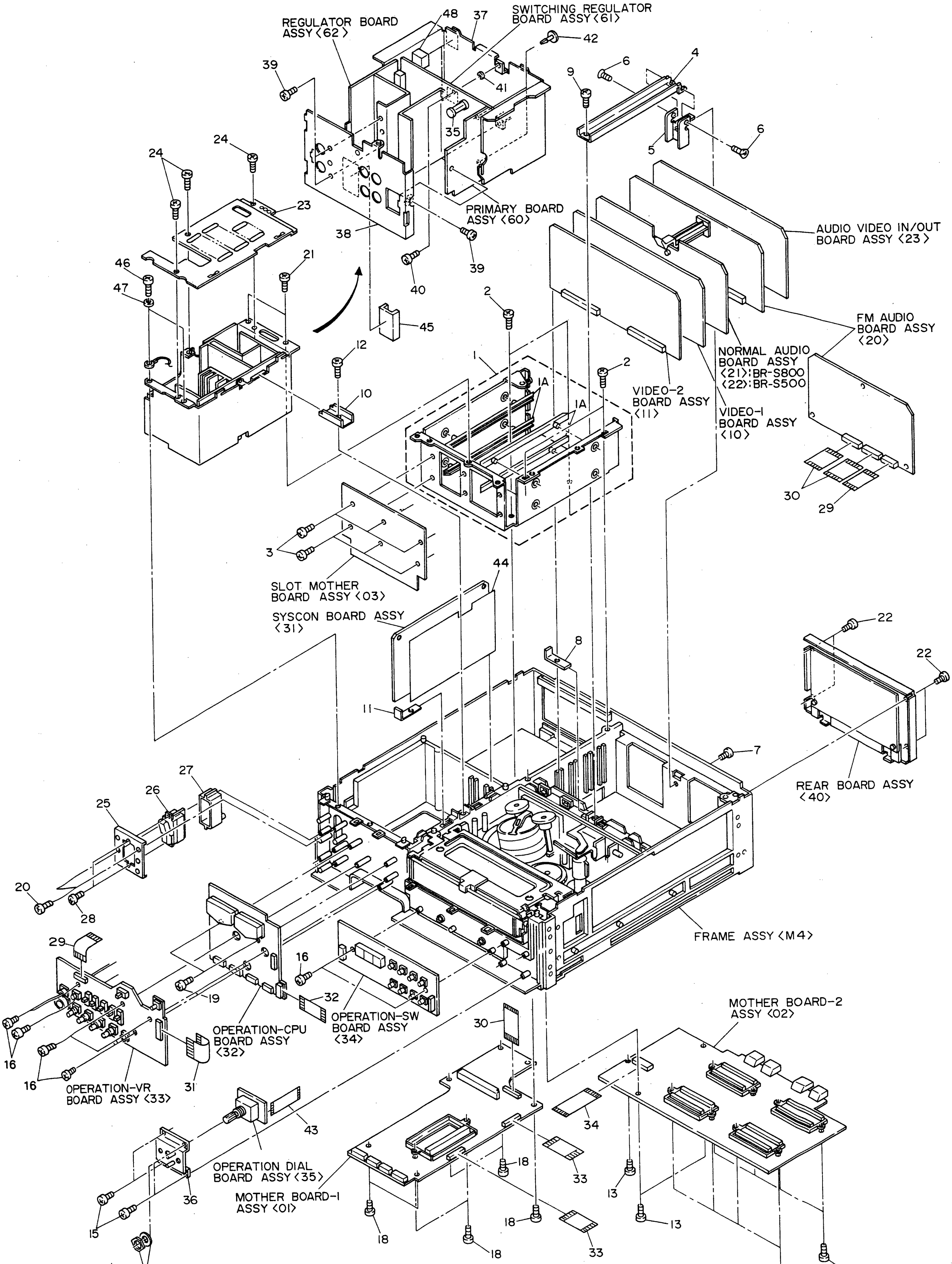

17
15
15C
15A
15B
16
23
22
19
18
25
24
7
6
4
5
3
2
9
1
8
25
20
21
13
10
11
12
14

CABINET ASSEMBLY M2

M 2 M M ☐☐☐☐

⚠ REF No.	PART No.	PART NAME, DESCRIPTION
1	PRD10320C-03	FRONT PANEL ASSY, BR-S800
1	PRD10320D-03	FRONT PANEL ASSY, BR-S500
2	PRD30889-01-02	KNOB(VR)
3	PRD30029-08	WASHER
4	PRD42830	SLIDE KNOB, ×5(S800), ×4(S500)
5	PRD43146	KNOB PLATE, ×5(S800), ×4(S500)
6	PRD43835	KNOB, (TRACKING)
7	PRD42909-04	KNOB PLATE
8	PGD40035A-1	SEARCH KNOB ASSY
9	PRD31027	KNOB, ×5(S800), ×1(S500)
10	QZF2319-001	FOOT, ×4
11	SDSF3020Z	SCREW, ×4
⚠ 12	PRD10313	BOTTOM COVER
13	SDSF3010Z	SCREW, ×3
14	SDSP3006Z	SCREW
15	PRD20498A	TOP COVER ASSY
⚠ 15A	PRD10310	TOP COVER
15B	PRD44308	SHADE
15C	PRD30030-133	PAD, ×2
16	PGD40255	SPACER, ×2
17	PRD30088-03	COIN SCREW, ×2
18	PRD10311	SIDE PANEL, (LEFT)
19	SXST4008NW	SPECIAL SCREW, ×4
20	PRD10312	SIDE PANEL, (RIGHT)
21	SXST4008NW	SPECIAL SCREW, ×4
22	PRD31013	PANEL(SLOT), ×2
23	SDSP3014R	SCREW, ×4
24	PRD30085-35-21	RATING LABEL, BR-S800
24	PRD30085-36-20	RATING LABEL, BR-S500
25	PQ40111-1-5	S NO PLATE
⚠ 26	PGD40147-06	CSA LABEL

5.3 CHASSIS assembly $\boxed{M}$ $\boxed{3}$

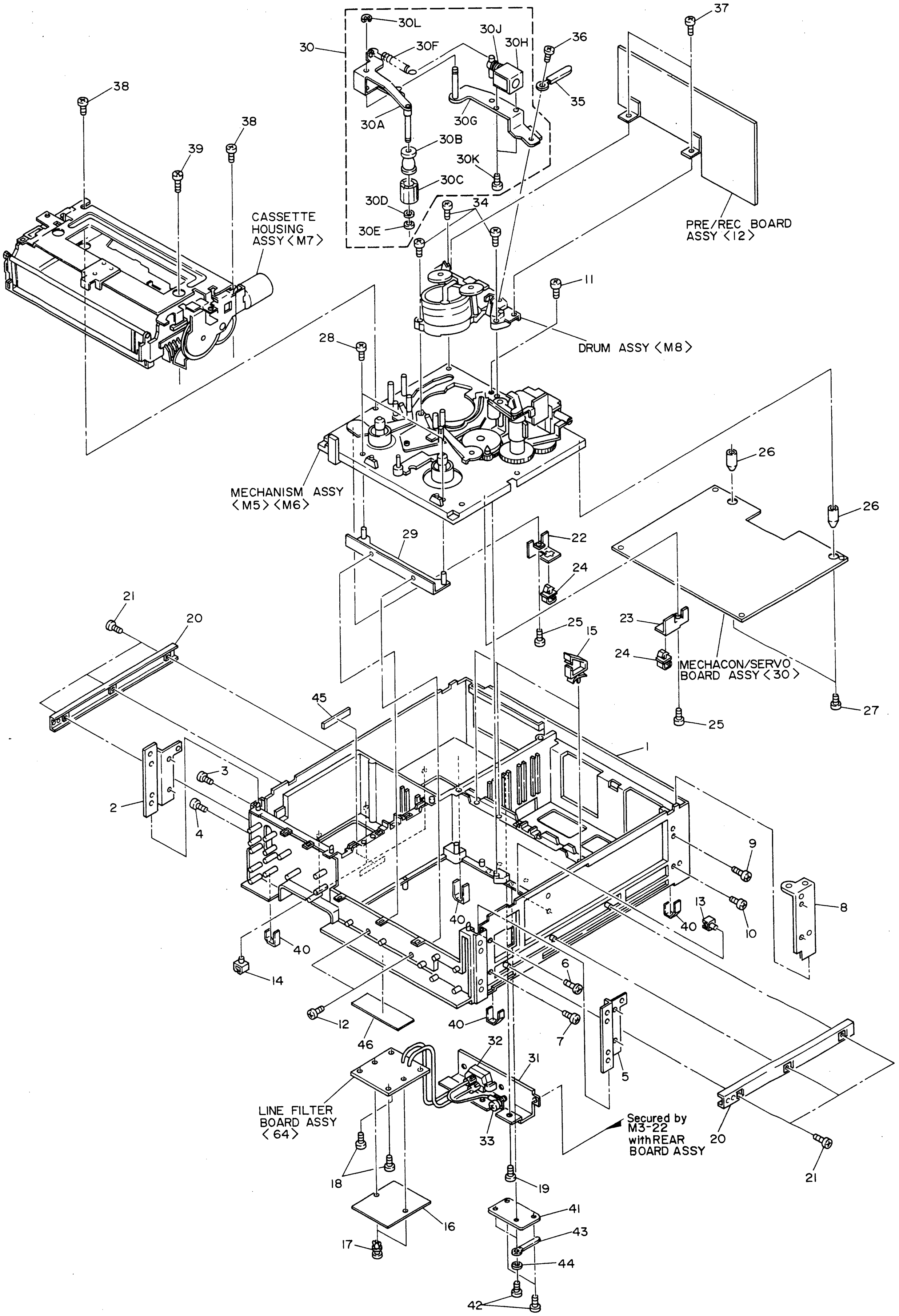

REGULATOR BOARD ASSY <62>
48
37
SWITCHING REGULATOR BOARD ASSY <61>
42
39
41
9
6
4
35
24
24
5
6
23
PRIMARY BOARD ASSY <60>
38
39
AUDIO VIDEO IN/OUT BOARD ASSY <23>
46
21
47
40
2
45
FM AUDIO BOARD ASSY <20>
12
1
1A
NORMAL AUDIO BOARD ASSY <21>:BR-S800 <22>:BR-S500
10
1A
2
VIDEO-2 BOARD ASSY <11>
VIDEO-1 BOARD ASSY <10>
30
29
3
44
SLOT MOTHER BOARD ASSY <03>
SYSCON BOARD ASSY <31>
22
8
22
11
7
27
26
25
REAR BOARD ASSY <40>
20
28
FRAME ASSY <M4>
29
16
19
32
OPERATION-CPU BOARD ASSY <32>
OPERATION-SW BOARD ASSY <34>
MOTHER BOARD-2 ASSY <02>
30
16
16
16
31
OPERATION-VR BOARD ASSY <33>
43
34
OPERATION DIAL BOARD ASSY <35>
18
33
13
36
MOTHER BOARD-1 ASSY <01>
15
18
13
18
18
33
13
13
Incl. <35>

CHASSIS ASSEMBLY M3

M3MM☐☐☐☐

⚠ REF No.	PART No.	PART NAME, DESCRIPTION
1	PRD20491A-01	HOLDER ASSY
1A	PGZ00493-03	GUIDE RAIL, ×4
2	SDSF3010Z	SCREW, ×4
3	SDST3006Z	SCREW, ×6
4	PRD31022-01-02	HOLDER(A)
5	PRD44249	BRACKET(BOARD HOLDER)
6	YQ40689	SPECIAL SCREW, ×2
7	SDST2606Z	SCREW
8	PRD44250	LEVER
9	SDSP3010Z	SCREW
10	PRD44252	HOLDER(B)
11	PRD44250	LEVER
12	SDSP3010Z	SCREW
13	SDSF3010Z	SCREW, ×11
15	SDSF3010Z	SCREW, ×4
16	SDSF3010Z	SCREW, ×8
18	SDSF3010Z	SCREW, ×6
19	SDSF3010Z	SCREW, ×2
20	SDSF3010Z	SCREW, ×2
21	PRD44050-05	SCREW, ×2
22	SDSF3010R	SCREW, ×4
23	PRD31024	CASE2
24	SDSP3006Z	SCREW, ×3
25	PRD44222	BRACKET(POWER SW)
⚠ 26	PGZ00479	SEESAW SW
⚠ 27	PRD42023	SW COVER
28	LPSP3006Z	ASSY SCREW, ×2
29	PGW0206-050180	FFC, ×2
30	PGW0206-050300	FFC, ×3
31	PGW0206-040180	FFC
32	PGW0206-050240	FFC
33	PGW0206-090180	FFC, ×2
34	PGW0206-140300	FFC
⚠ 35	QMF51J1-1R6N	FUSE, (F001) T1.6A
36	PRD44221	BRACKET, (SEARCH)
37	PRD20489	CASE1
38	PRD31019	HEAT SINK
39	PRD44050-05	SCREW, ×3
40	PRD44050-05	SCREW, ×2
41	WBS3000N	WASHER
42	PU60010-3	SPACER, ×2
43	PGW0109-90AC556	FLAT WIRE
44	PRD44318	SHIELD PLATE, INCLUDED <31>
45	PRD44322	PAD
46	SDSF3016Z	SCREW, ×2
47	WLS3000N	LOCK WASHER
48	PRD30030-132	PAD, ×2

5.4 FRAME assembly M 4

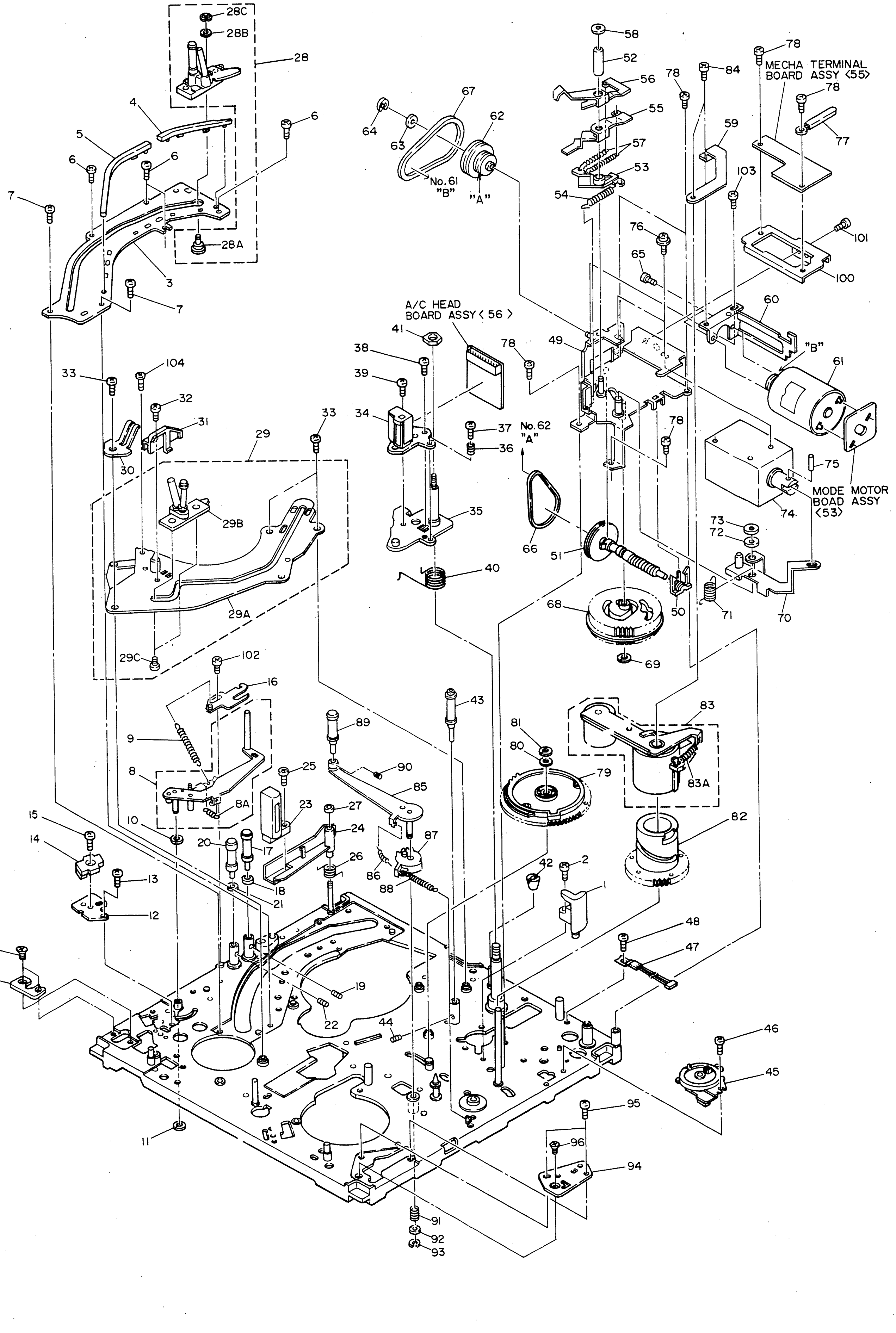

30L
30
30F
30J
30H
36
37
38
35
38
30A
30G
30B
39
30K
30C
30D
34
30E
CASSETTE HOUSING ASSY ⟨M7⟩
PRE/REC BOARD ASSY ⟨12⟩
11
DRUM ASSY ⟨M8⟩
28
26
MECHANISM ASSY ⟨M5⟩⟨M6⟩
26
29
22
24
21
20
25
23
15
24
MECHACON/SERVO BOARD ASSY ⟨30⟩
45
27
25
1
3
2
4
9
8
40
13
40
10
40
6
14
12
40
7
46
32
31
5
LINE FILTER BOARD ASSY ⟨64⟩
33
Secured by M3-22 with REAR BOARD ASSY
20
21
18
19
41
16
43
17
44
42

FRAME ASSEMBLY M4

M 4 M M ☐☐☐☐

⚠ REF No.	PART No.	PART NAME, DESCRIPTION
⚠ 1	PRD10319	BOTTOM CHASSIS
2	PRD31000	BRACKET(F-LEFT)
3	SSSP3006Z	SCREW
4	SDSP3006Z	SCREW
5	PRD31000-02	BRACKET(F-RIGHT)
6	SSSP3006Z	SCREW
7	SDSP3006Z	SCREW
8	PRD30999	BRACKET(REAR)
9	SSSP3006Z	SCREW
10	SDSP3006Z	SCREW
11	SDSF4025Z	SCREW
12	DPSP4010Z	SCREW, ×2
13	PU48016-2	MINI CLAMP
14	PU59311-3	WIRE CLAMP, ×3
15	PGZ00452	L WIRE SADOLE, ×3
16	PRD44271	INSULATOR
17	PGZ01951	PLASTIC RIVET, ×2
18	SDSF3010Z	SCREW, ×2
19	SDSP3006Z	SCREW
20	PRD31016	BRACKET(RACK RAIL), ×2
21	SDSF3010Z	SCREW, ×6
22	PRD44274	HINGE L
23	PRD44275	HINGE R
24	PGZ00606-03	BOARD HOLDER, ×2
25	SDST2605Z	SCREW, ×2
26	PGZ01961	SNAP COLLAR, ×2
27	SPSB2620Z	SCREW, ×2
28	PRD30082-02	FLANGE SCREW, ×2
29	PRD31017A	BRACKET ASSY
30	PRD30797B	HEAD CLEANER ASSY
30A	PRD43590B	CLEANER ARM SUB ASSY
30B	PQ45689	ROLLER
30C	PQ44837	CLEANER
30D	Q03093-829	WASHER
30E	PQM30017-25	SLIT WASHER
30F	PRD30024-62	TENSION SPRING
30G	PRD43591B	CLEANER BRACKET ASSY
⚠ 30H	PGZ01973	SOLENOID
30J	PRD30023-36	COMPRESSION SPRING
30K	SPSP2003Z	SCREW, ×2
30L	REE2500	"E" RING
31	PRD31004-02	BRACKET (AC INLET)
32	PGZ01945	AC INLET
33	LPSP4006Z	SCREW
34	LPSP2612Z	SCREW, ×3
35	PU49485-4	WIRE CLAMP
36	DPSP2606Z	SCREW
37	DPSP2608Z	SCREW, ×2
38	LPSP2605Z	ASSY SCREW, ×2
39	SDSP2608Z	SCREW
40	PRD30030-128	PAD, ×4
41	PRD44317	BRACKET
42	SDSF3010Z	SCREW, ×4
43	PU49485-4	WIRE CLAMP, ×2
44	WLS3000N	LOCK WASHER, ×2
45	PRD30030-131	PAD
46	PRD30030-129	PAD

5.5 MECHANISM-1 assembly M 5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"A"
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MECHA TERMINAL BOARD ASSY <55>
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101
100
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"B"
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A/C HEAD BOARD ASSY < 56 >
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29B
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No.62 "A"
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MODE MOTOR BOAD ASSY <53>
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102
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8A
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83A
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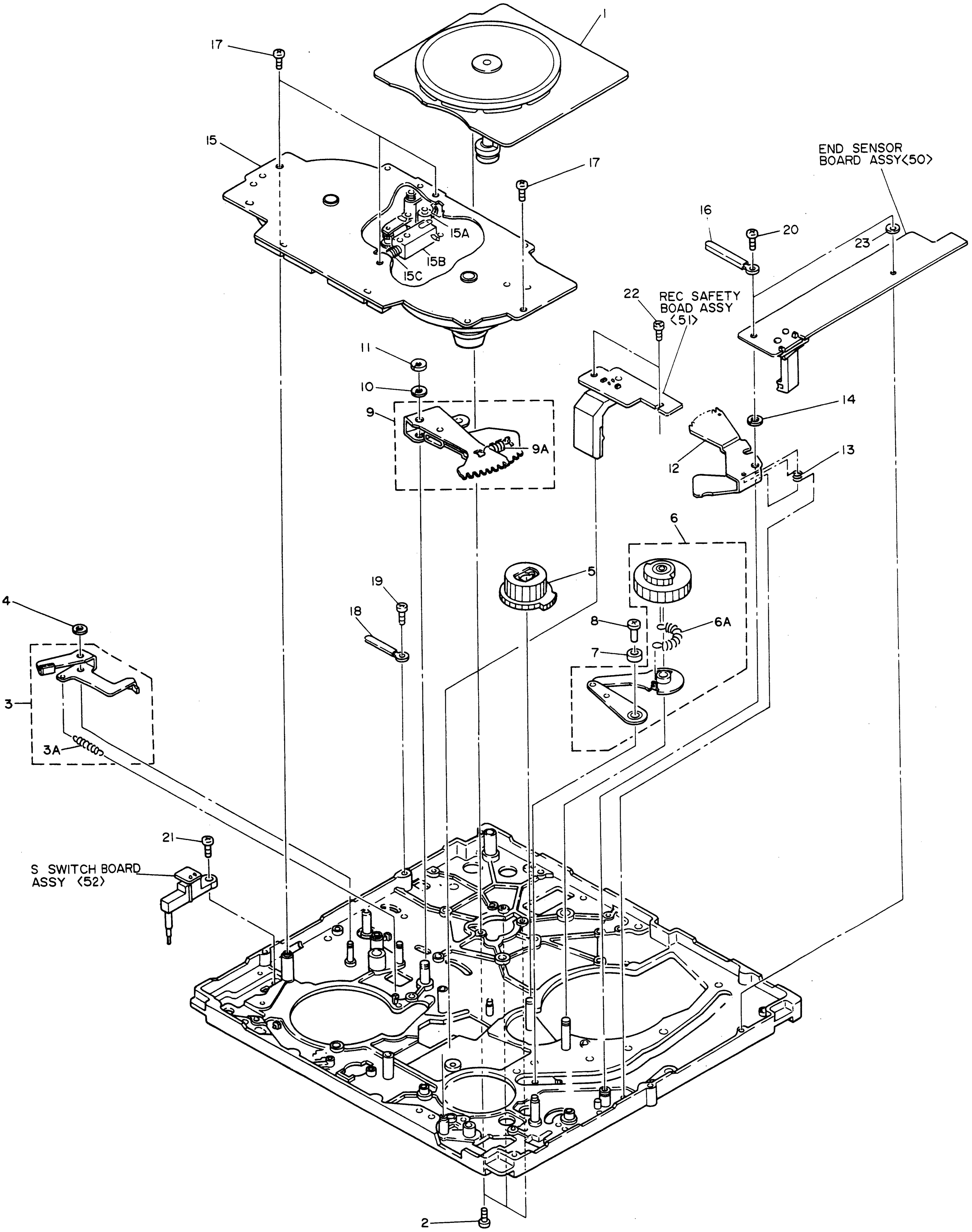
5.6 MECHANISM-2 assembly M 6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BOARD ASSY<50>
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REC SAFETY
BOAD ASSY
<51>
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9A
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18
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8
6A
7
3
3A
21
S SWITCH BOARD
ASSY <52>
2

MECHANISM-2 ASSEMBLY M6

M 6 M M □ □ □ □

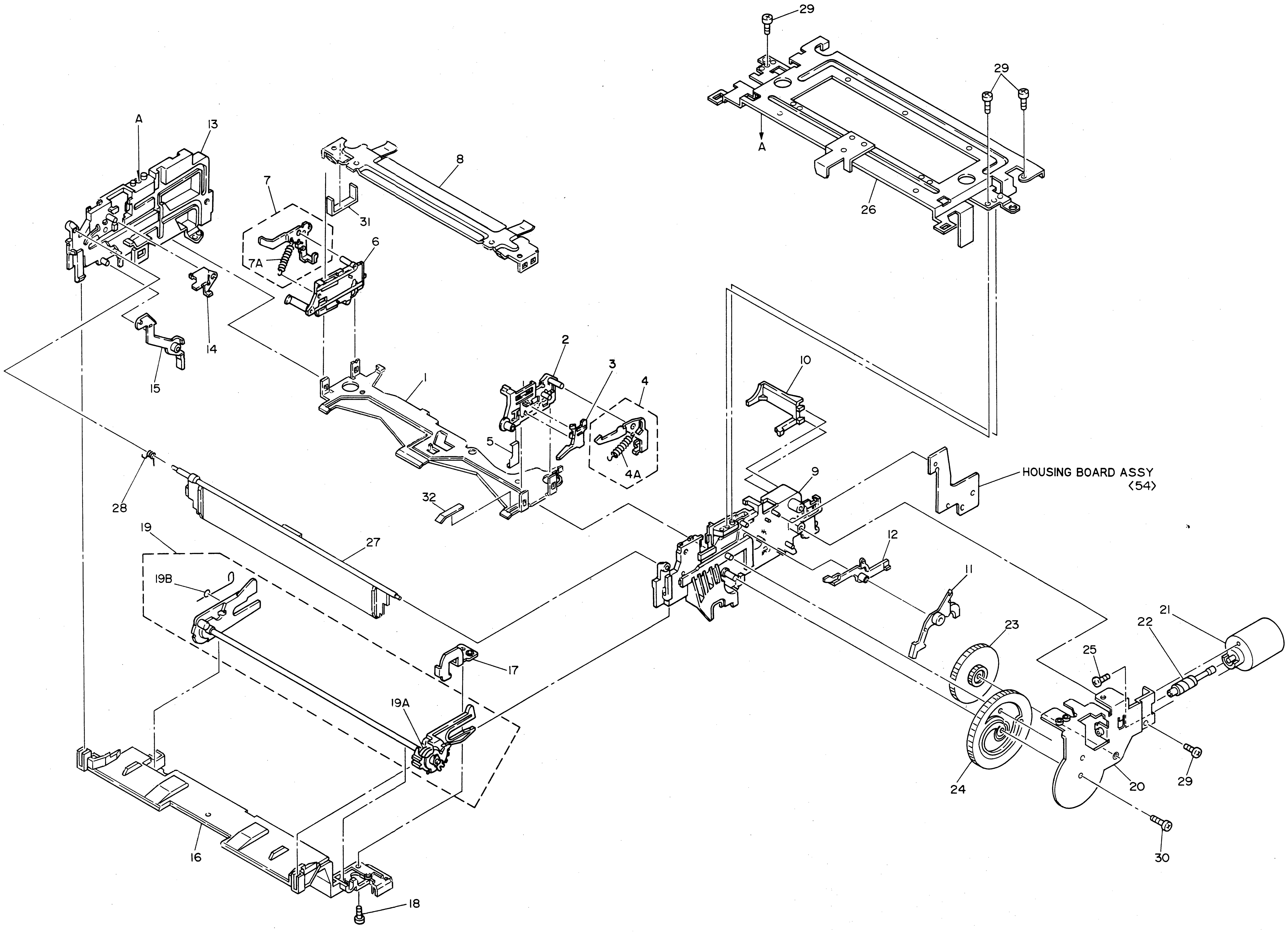
⚠ REF No.	PART No.	PART NAME, DESCRIPTION
⚠ 1	PGZ01535-01-01	CAPSTAN MOTOR
2	SDSP2608Z	SCREW, ×3
3	PRD43479A-01	REEL BRAKE ASSY
3A	PRD30024-58	TENSION SPRING
4	PQM30017-6	SLIT WASHER
5	PQ34033	LOADING GEAR(TAKE UP)
6	PRD43923A	LOADING GEAR(SUPPLY) ASSY
6A	PQM30001-318	TENSION SPRING
7	PRD44019	COLLAR
8	PRD44287	SPECIAL SCREW
9	PQ45306B-3	ARM GEAR ASSY
9A	PQM30001-320	TENSION SPRING
10	Q03093-833	WASHER
11	REE3000	“E”RING
12	PQ34007	CANCEL LEVER
13	PQ45313	TORSION SPRING
14	PQM30017-12	SLIT WASHER
⚠ 15	PGZ01958A	REEL MOTOR
15A	PGZ01958-001	LED HOLDER ASSY
15B	PGZ01958-002	SOLENOID
15C	PGZ01958-003	COMPRESSION SPRING
16	PU49485-4	WIRE CLAMP, ×2
17	SDST2605Z	SCREW, ×4
18	PU49485-4	WIRE CLAMP
19	SDST2605Z	SCREW
20	DPSP2606Z	SCREW, ×2
21	SDST2605Z	SCREW
22	SDST2605Z	SCREW
23	Q03093-826	WASHER

CASSETTE HOUSING ASSEMBLY M7

M 7 M M ☐ ☐ ☐ ☐

⚠ REF No.	PART No.	PART NAME, DESCRIPTION
	PGS21023A	CASSETTE HOUSING ASSY
1	PRD20464	CASSETTE HOLDER
2	PQ11278-01-01	SIDE HOLDER(R)
3	PQ45459	LID OPENER
4	PQ43596A-5	LOCK LEVER(R) ASSY
4A	PQ43597-1-5	TENSION SPRING
5	PRD44285	EARTH PLATE
6	PQ11279	SIDE HOLDER(L)
7	PQ45539A-01	LOCK LEVER(L) ASSY
7A	PQ43597-2	TENSION SPRING
8	PRD30982A	HOLDER STAY ASSY
9	PQ11281-01-06	HOUSING STAY(R)
10	PQ34097	LID GUIDE
11	PQ34098	SENSOR LEVER
12	PRD30946	INSERT SWITCH LEVER
13	PQ11282-01-06	HOUSING STAY(L)
14	PQ45479-01-02	DOOR STOPPER
15	PQ34100	DOOR OPENER
16	PRD10301-01-02	FRONT BRACKET
17	PRD43729	BASE BRACKET
18	SSSP2606Z	SCREW
19	PQ34103A-04	MAIN ARM ASSY
19A	PRD43806	TORSION SPRING
19B	PQ43605	TORSION SPRING
20	PRD30983A	MOTOR BRACKET ASSY
⚠ 21	PQ45489A	MOTOR ASSY
22	PQ45474	WORM GEAR
23	PQ34109-01-01	CONNECT GEAR
24	PQ34110-01-01	IDLER CAM
25	SPSP3003Z	SCREW, ×2
26	PRD30981A	TOP FRAME ASSY
27	PRD30962	CASSETTE HOUSING DOOR
28	PRD44088	TORSION SPRING
29	SDSF2608Z	SCREW, ×4
30	SDSF2612Z	SCREW
31	PRD44319	TEPHRON SHEET
32	PRD30030-130	PAD

5.7 CASSETTE HOUSING assembly M 7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HOUSING BOARD ASSY
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4A
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19B
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19A
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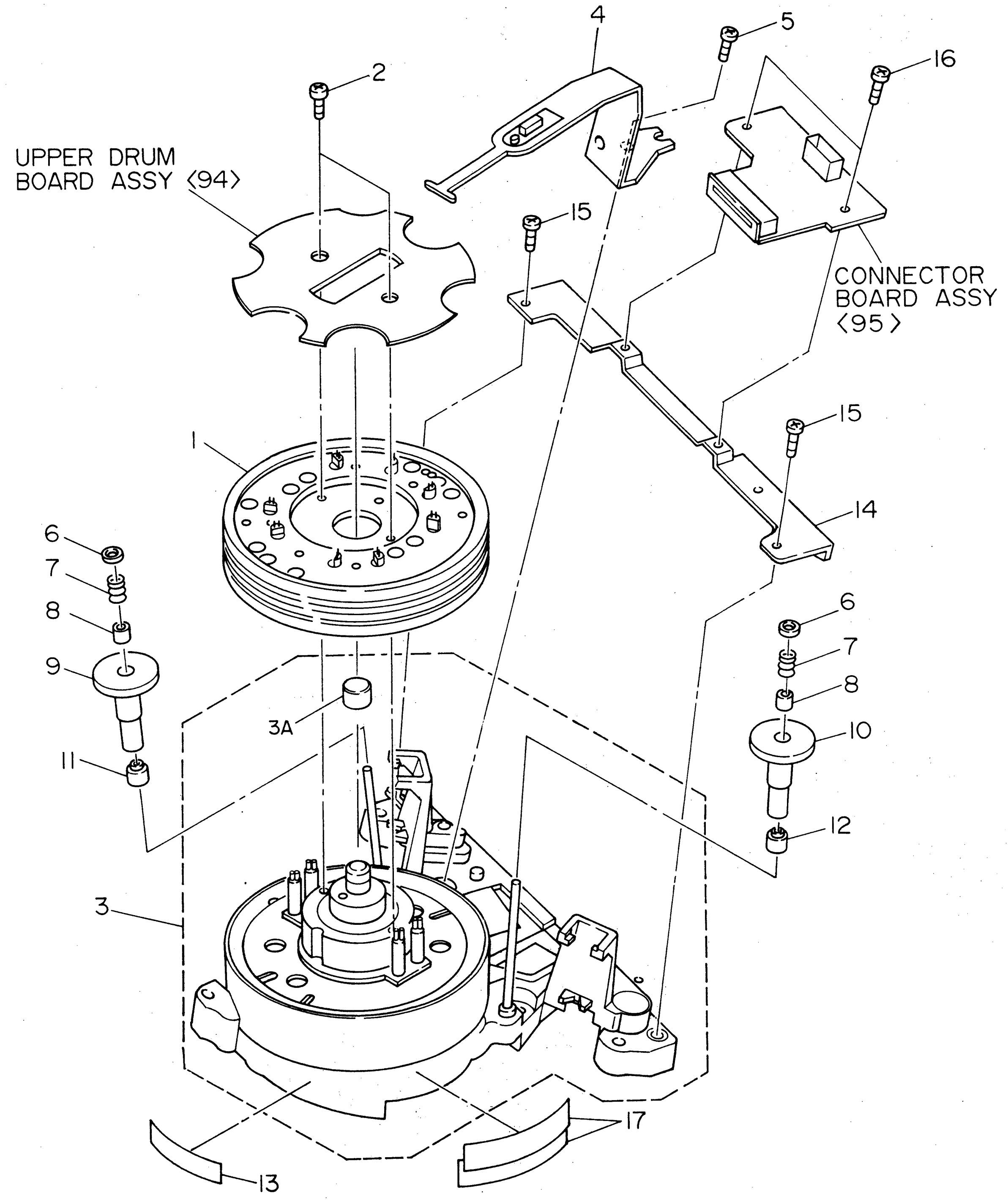
18

5.8 DRUM assembly M8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UPPER DRUM BOARD ASSY <94>
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CONNECTOR BOARD ASSY <95>
15
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3A
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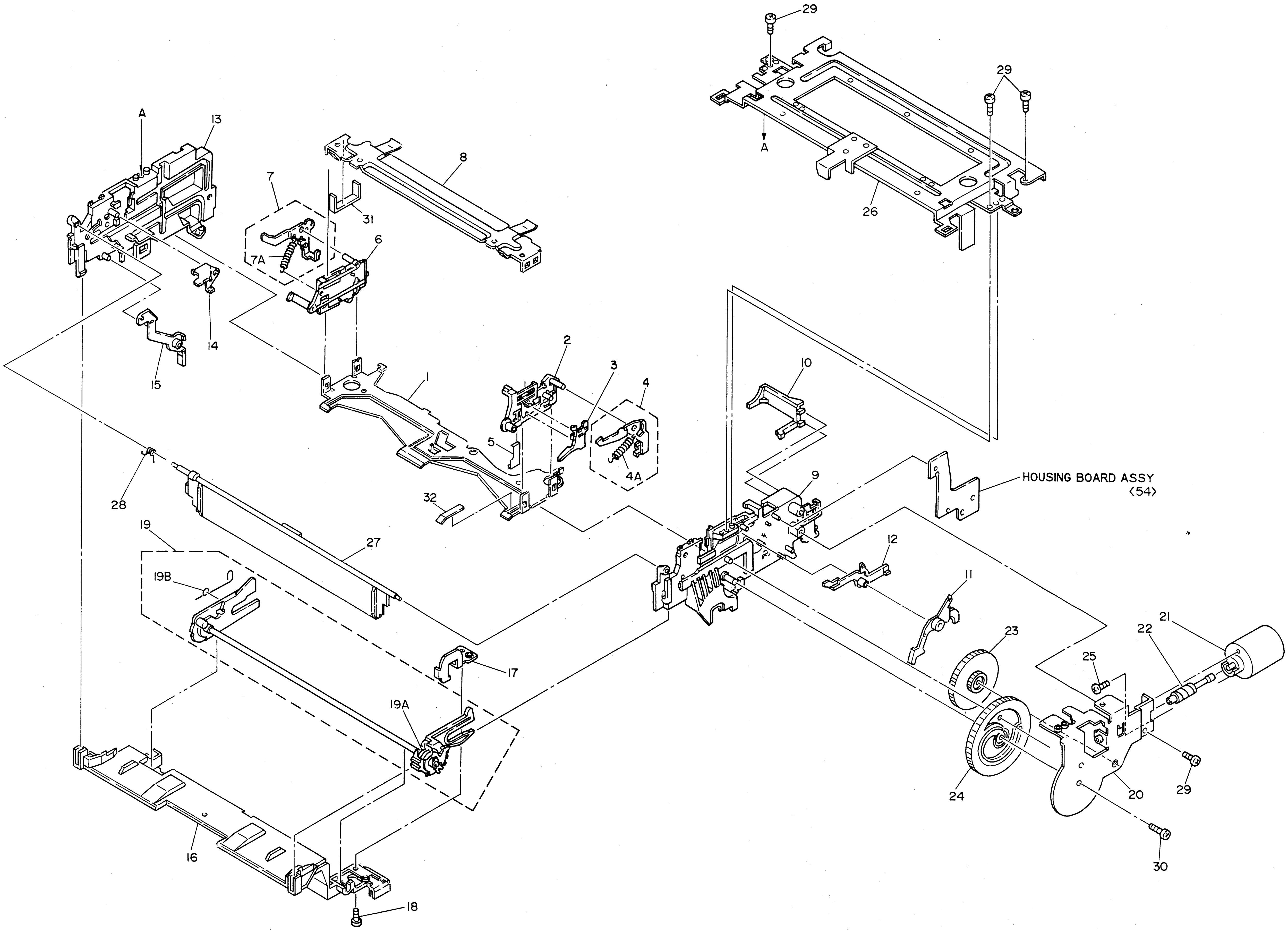
DRUM ASSEMBLY M8

M 8 M M ☐ ☐ ☐ ☐

⚠ REF No.	PART No.	PART NAME, DESCRIPTION
⚠	LDR2001A	DRUM ASSY, BR-S800
⚠	LDR2002A	DRUM ASSY, BR-S500
1	PRD20458A	UPPER DRUM ASSY, BR-S800
1	PRD20485A	UPPER DRUM ASSY, BR-S500
2	PDM4165A	DRUM SCREW ASSY, ×2
3	PRD20460A	LOWER DRUM MOTOR ASSY
3A	PQ41596D	COMUTATOR ASSY
4	PRD44288A	BRUSH ASSY
5	SDSG2606Z	SCREW
6	PQM30017-25	SLIT WASHER, ×2
7	PRD30023-42	COMPRESSION SPRING, ×2
8	PRD30026-49	COLLAR, ×2
9	PGZ01920	INERTIA ROLLER ASSY(S)
10	PGZ01920-02	INERTIA ROLLER ASSY(T)
11	PRD30026-50	COLLAR
12	PRD30026-51	COLLAR
13	PDM4067	PART NO. LABEL
14	PRD31025	BOARD BRACKET
15	SDSG2606Z	SCREW, ×2
16	SDSG2606Z	SCREW, ×2
17	PRD43750	LABEL, ×2

5.7 CASSETTE HOUSING assembly M 7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HOUSING BOARD ASSY
<54>
28
32
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19B
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19A
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18

SECTION 6
ELECTRICAL PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

NOTES:

- [M] indicates mechanical symbol number.
- [2 digits] indicates circuit board symbol number.
- ''X '' indicates quantity per set.

MOTHER-1 BOARD ASSEMBLY <01>

#△	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK10152A	MOTHER1 BOARD ASSY
△	K1	PGZ00354	FERRATE BEADS, ×9
	BKT1	PRD31002	BRACKET, (FOR 64PIN-DIN)
	CL1	PU59311-3	WIRE CLAMP, ×2
	SCW1	SDST3006Z	SCREW, ×2
	SCW2	SDST2606Z	SCREW, ×2
	SPC1	PGZ01031-03	P C SUPPORT
	TP1	PGZ01377	STYLE PIN, ×4
	CN1	PGZ01940-64	BOARD CONNECTOR
	CN2	PGZ01940-64	BOARD CONNECTOR
	CN3	PGZ01941-10	BOARD CONNECTOR
	CN4	PGZ01941-10	BOARD CONNECTOR
	CN5	PGZ01941-10	BOARD CONNECTOR
	CN6	PGZ01941-10	BOARD CONNECTOR
	CN7	PU60711-118	CONNECTOR
	CN8	PU60711-118	CONNECTOR
	CN9	PU59973-30	CONNECTOR
	CN10	PU59973-30	CONNECTOR
	CN11	PU59555-111	CONNECTOR
	CN12	PU59555-110	CONNECTOR
	CN13	PU59555-109	CONNECTOR
	CN14	PU59555-106	CONNECTOR
	CN15	PU59555-105	CONNECTOR
	CN16	PU59555-107	CONNECTOR
	CN17	PU59555-103	CONNECTOR

MOTHER-2 BOARD ASSEMBLY <02>

#△	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK10153A	MOTHER2 BOARD ASSY
	BKT1	PRD44292	BRACKET, ×4(FOR 44PIN-DIN)
	CL1	PU59311-3	WIRE CLAMP, ×4
	SCW1	SDST3006Z	SCREW, ×8
	SCW2	SDST2606Z	SCREW, ×14
	SPC1	PGZ01031-03	P C SUPPORT, ×3
	TP1	PGZ01377	STYLE PIN, ×2
	CN1	PGZ01940-44	DIN CONNECTOR
	CN2	PGZ01940-44	DIN CONNECTOR
	CN3	PGZ01940-44	DIN CONNECTOR
	CN4	PGZ01940-44	DIN CONNECTOR
	CN5	PGZ01940-44	DIN CONNECTOR
	CN6	PGZ01940-44	DIN CONNECTOR
	CN7	PGZ01940-44	DIN CONNECTOR
	CN8	PGZ01941-10	BOARD CONNECTOR
	CN9	PGZ01941-10	BOARD CONNECTOR
	CN10	PGZ01941-10	BOARD CONNECTOR
	CN11	PGZ01941-10	BOARD CONNECTOR
	CN12	PU60711-130	CONNECTOR
	CN13	PU59973-30	CONNECTOR
	CN14	PU59555-111	CONNECTOR
	CN15	PU59555-109	CONNECTOR
	CN16	PU59555-103	CONNECTOR

SLOT MOTHER BOARD ASSEMBLY <03>

#△	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20232A	SLOT MOTHER BOARD ASSY
	SW1	QSS1K31-L01	DIP SWITCH, ×2(SW1-1,SW1-2)
	SW2	QSS1K31-L01	DIP SWITCH, ×2(SW2-1,SW2-2)
	SW3	PU54440	SWITCH
	CN1	PGZ01937-64	MALE CONNECTOR
	CN2	PGZ01940-32	FEMALE CONNECTOR
	CN3	PGZ01940-20	FEMALE CONNECTOR
	CN4	PGZ01940-32	FEMALE CONNECTOR
	CN5	PGZ01940-20	FEMALE CONNECTOR

VIDEO-1 BOARD ASSEMBLY <10>

#△	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20227A-01	VIDEO-1 BOARD ASSY, BR-S800
	PWBA	PRK20227B-01	VIDEO-1 BOARD ASSY, BR-S500
	IC1	AN3916	IC, BR-S800
	IC2	CXD2023Q	IC, BR-S800
	IC3	TA7347P	IC, BR-S800
	IC4	LVA523SA	IC
	IC5	TA7347P	IC, BR-S800
	IC6	TA7347P	IC
	IC7	M52366FP	IC

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
IC8	TA7347P	IC
IC9	TL8825F-XE	IC
IC12	M52350GP	IC
IC13	TC74HC4094AF	IC
IC14	M5278L05	IC, BR-S800
Q1	2SC2412K(RS)	TRANSISTOR, BR-S800
Q2	2SC2412K(RS)	TRANSISTOR, BR-S800
Q3	2SC2412K(RS)	TRANSISTOR, BR-S800
Q4	2SC2412K(RS)	TRANSISTOR, BR-S800
Q5	2SC2412K(RS)	TRANSISTOR, BR-S800
Q6	2SC2412K(RS)	TRANSISTOR, BR-S800
Q7	2SA1037K(QR)	TRANSISTOR, BR-S800
Q8	2SC2412K(RS)	TRANSISTOR, BR-S800
Q9	2SK621	FE TRANSISTOR, BR-S800
Q10	2SK621	FE TRANSISTOR, BR-S800
Q11	2SC2412K(RS)	TRANSISTOR, BR-S800
Q12	2SC2412K(RS)	TRANSISTOR, BR-S800
Q13	2SA1037K(QR)	TRANSISTOR, BR-S800
Q14	2SC2412K(RS)	TRANSISTOR, BR-S800
Q15	2SC2412K(RS)	TRANSISTOR, BR-S800
Q16	2SC2412K(RS)	TRANSISTOR, BR-S800
Q17	2SC2412K(RS)	TRANSISTOR, BR-S800
Q18	2SC2412K(RS)	TRANSISTOR, BR-S800
Q19	2SA1037K(QR)	TRANSISTOR, BR-S800
Q20	2SC2412K(RS)	TRANSISTOR, BR-S800
Q21	2SC2412K(RS)	TRANSISTOR
Q22	2SC2412K(RS)	TRANSISTOR
Q23	2SC2412K(RS)	TRANSISTOR
Q24	2SC2412K(RS)	TRANSISTOR
Q25	2SC2412K(RS)	TRANSISTOR
Q26	2SC1740S(QRS)	TRANSISTOR
Q27	2SC1740S(QRS)	TRANSISTOR
Q28	DTC144EK	TRANSISTOR
Q29	2SC2412K(RS)	TRANSISTOR, BR-S800
Q30	2SC2412K(RS)	TRANSISTOR, BR-S800
Q31	2SC2412K(RS)	TRANSISTOR, BR-S800
Q32	2SC2412K(RS)	TRANSISTOR
Q33	2SA1037K(QR)	TRANSISTOR
Q34	2SC1740S(QRS)	TRANSISTOR
Q35	2SC2412K(RS)	TRANSISTOR
Q36	2SC2412K(RS)	TRANSISTOR
Q37	2SC2412K(RS)	TRANSISTOR
Q38	2SC2412K(RS)	TRANSISTOR
Q39	2SC2412K(RS)	TRANSISTOR
Q40	2SC1740S(QRS)	TRANSISTOR
Q41	2SC1740S(QRS)	TRANSISTOR
Q42	2SA1037K(QR)	TRANSISTOR, BR-S800
Q43	2SC2412K(RS)	TRANSISTOR, BR-S800
Q44	2SC2412K(RS)	TRANSISTOR
Q47	DTA144EK	TRANSISTOR
Q48	2SC2412K(RS)	TRANSISTOR
Q49	DTC144EK	TRANSISTOR
Q50	2SA1037K(QR)	TRANSISTOR
Q51	2SD601A(QR)	TRANSISTOR
Q52	2SC2412K(RS)	TRANSISTOR

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
Q53	2SA1037K(QR)	TRANSISTOR	
Q63	2SC2412K(RS)	TRANSISTOR	
Q64	DTA144EK	TRANSISTOR	
Q65	DTC144EK	TRANSISTOR	
Q66	DTC144EK	TRANSISTOR	
Q67	2SC2412K(RS)	TRANSISTOR	
Q68	2SC2412K(RS)	TRANSISTOR	
Q69	2SC2412K(RS)	TRANSISTOR	
Q70	2SC2412K(RS)	TRANSISTOR	
Q71	2SC2412K(RS)	TRANSISTOR	
Q72	2SC2412K(RS)	TRANSISTOR	
Q73	2SC2412K(RS)	TRANSISTOR	
Q74	2SA1037K(QR)	TRANSISTOR	
Q75	DTC144EK	TRANSISTOR	
Q76	DTC144EK	TRANSISTOR	
Q77	DTC144EK	TRANSISTOR	
Q78	2SC2412K(RS)	TRANSISTOR	
Q79	2SA1037K(QR)	TRANSISTOR	
Q80	2SC2412K(RS)	TRANSISTOR	
Q81	2SA1037K(QR)	TRANSISTOR	
Q82	2SK621	FE TRANSISTOR	
Q83	2SC2412K(RS)	TRANSISTOR	
Q84	2SC2412K(RS)	TRANSISTOR	
Q85	2SC2412K(RS)	TRANSISTOR	
Q86	2SC2412K(RS)	TRANSISTOR	
Q87	2SC2412K(RS)	TRANSISTOR	
Q88	2SC2412K(RS)	TRANSISTOR	
Q89	2SC2412K(RS)	TRANSISTOR	
Q90	2SC2412K(RS)	TRANSISTOR	
Q91	DTC144EK	TRANSISTOR	
D1	DAN202K	DIODE, BR-S800	
D4	DAN202K	DIODE	
D5	DAN202K	DIODE	
D6	DAN202K	DIODE	
D7	1SS99	DIODE	
D8	1SS99	DIODE	
D9	DAN202K	DIODE	
D11	DAN202K	DIODE	
D12	DAN202K	DIODE	
D14	1SS133	DIODE, BR-S800	
R1	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R2	QRSA08J-273YN	RESISTOR, BR-S800	27kΩ,1/10W
R3	QRSA08J-152YN	RESISTOR, BR-S800	1.5kΩ,1/10W
R4	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R5	QRSA08J-273YN	RESISTOR, BR-S800	27kΩ,1/10W
R6	QRSA08J-152YN	RESISTOR, BR-S800	1.5kΩ,1/10W
R7	QRSA08J-122YN	RESISTOR, BR-S800	1.2kΩ,1/10W
R8	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
R10	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R11	QVPC625-303Z	V RESISTOR, BR-S800	30kΩ
R12	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R13	QRSA08J-273YN	RESISTOR, BR-S800	27kΩ,1/10W
R14	QRSA08J-821YN	RESISTOR, BR-S800	820Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
R15	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R16	QRSA08J-391YN	RESISTOR, BR-S800 390Ω,1/10W
R17	QRSA08J-391YN	RESISTOR, BR-S800 390Ω,1/10W
R18	QRSA08J-333YN	RESISTOR, BR-S800 33kΩ,1/10W
R19	QRSA08J-103YN	RESISTOR, BR-S800 10kΩ,1/10W
R20	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R21	QRSA08J-561YN	RESISTOR, BR-S800 560Ω,1/10W
R22	QRSA08J-101YN	RESISTOR, BR-S800 100Ω,1/10W
R23	QRSA08J-821YN	RESISTOR, BR-S800 820Ω,1/10W
R24	QRSA08J-122YN	RESISTOR, BR-S800 1.2kΩ,1/10W
R25	QRSA08J-103YN	RESISTOR, BR-S800 10kΩ,1/10W
R26	QRSA08J-182YN	RESISTOR, BR-S800 1.8kΩ,1/10W
R27	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R28	QRSA08J-153YN	RESISTOR, BR-S800 15kΩ,1/10W
R29	QRSA08J-750YN	RESISTOR, BR-S800 75Ω,1/10W
R30	QRSA08J-201YN	RESISTOR, BR-S800 200Ω,1/10W
R31	QRSA08J-332YN	RESISTOR, BR-S800 3.3kΩ,1/10W
R32	QRSA08J-201YN	RESISTOR, BR-S800 200Ω,1/10W
R33	QVPC625-102Z	V RESISTOR, BR-S800 1kΩ
R34	QVPC625-102Z	V RESISTOR, BR-S800 1kΩ
R35	QRSA08J-332YN	RESISTOR, BR-S800 3.3kΩ,1/10W
R36	QRSA08J-393YN	RESISTOR, BR-S800 39kΩ,1/10W
R37	QRSA08J-223YN	RESISTOR, BR-S800 22kΩ,1/10W
R38	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R39	QRSA08J-201YN	RESISTOR, BR-S800 200Ω,1/10W
R40	QRSA08J-201YN	RESISTOR, BR-S800 200Ω,1/10W
R41	QRSA08J-393YN	RESISTOR, BR-S800 39kΩ,1/10W
R42	QRSA08J-103YN	RESISTOR, BR-S800 10kΩ,1/10W
R43	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R44	QRSA08J-471YN	RESISTOR, BR-S800 470Ω,1/10W
R45	QRSA08J-101YN	RESISTOR, BR-S800 100Ω,1/10W
R46	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R47	QRSA08J-152YN	RESISTOR, BR-S800 1.5kΩ,1/10W
R48	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R49	QRSA08J-562YN	RESISTOR, BR-S800 5.6kΩ,1/10W
R50	QRSA08J-122YN	RESISTOR, BR-S800 1.2kΩ,1/10W
R51	QRSA08J-122YN	RESISTOR, BR-S800 1.2kΩ,1/10W
R52	QRSA08J-393YN	RESISTOR, BR-S800 39kΩ,1/10W
R53	QRSA08J-223YN	RESISTOR, BR-S800 22kΩ,1/10W
R54	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R55	QRSA08J-201YN	RESISTOR, BR-S800 200Ω,1/10W
R56	QRSA08J-201YN	RESISTOR, BR-S800 200Ω,1/10W
R57	QRSA08J-393YN	RESISTOR, BR-S800 39kΩ,1/10W
R58	QRSA08J-123YN	RESISTOR, BR-S800 12kΩ,1/10W
R59	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R60	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R61	QRSA08J-101YN	RESISTOR, BR-S800 100Ω,1/10W
R62	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R63	QRSA08J-152YN	RESISTOR, BR-S800 1.5kΩ,1/10W
R64	QRSA08J-333YN	RESISTOR 33kΩ,1/10W
R65	QRSA08J-393YN	RESISTOR 39kΩ,1/10W
R66	QRSA08J-471YN	RESISTOR 470Ω,1/10W
R67	QRSA08J-123YN	RESISTOR 12kΩ,1/10W
R68	QRSA08J-105YN	RESISTOR 1MΩ,1/10W
R69	QRSA08J-105YN	RESISTOR 1MΩ,1/10W
R70	QRSA08J-683YN	RESISTOR 68kΩ,1/10W
R71	QRSA08J-181YN	RESISTOR 180Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
R72	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R73	QRSA08J-181YN	RESISTOR 180Ω,1/10W
R74	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R75	QRSA08J-153YN	RESISTOR 15kΩ,1/10W
R76	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R77	QRSA08J-391YN	RESISTOR 390Ω,1/10W
R78	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R79	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R80	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R81	QRSA08J-153YN	RESISTOR 15kΩ,1/10W
R82	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R83	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R84	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R85	QRD161J-330	RESISTOR 33Ω,1/6W
R86	QRD161J-820	RESISTOR 82Ω,1/6W
R87	QRSA08J-123YN	RESISTOR 12kΩ,1/10W
R88	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R89	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R90	QRSA08J-750YN	RESISTOR 75Ω,1/10W
R91	QRSA08J-562YN	RESISTOR, BR-S800 5.6kΩ,1/10W
R92	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R93	QRSA08J-122YN	RESISTOR, BR-S800 1.2kΩ,1/10W
R94	QRSA08J-333YN	RESISTOR, BR-S800 33kΩ,1/10W
R95	QRSA08J-273YN	RESISTOR, BR-S800 27kΩ,1/10W
R96	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R97	QRSA08J-152YN	RESISTOR, BR-S800 1.5kΩ,1/10W
R98	QRSA08J-152YN	RESISTOR, BR-S800 1.5kΩ,1/10W
R99	QRSA08J-562YN	RESISTOR 5.6kΩ,1/10W
R100	QRSA08J-393YN	RESISTOR 39kΩ,1/10W
R101	QRSA08J-183YN	RESISTOR 18kΩ,1/10W
R102	QRSA08J-101YN	RESISTOR 100Ω,1/10W
R103	NRVA62D-391N	RESISTOR 390Ω,1/16W
R104	NRVA62D-391N	RESISTOR 390Ω,1/16W
R105	NRVA62D-391N	RESISTOR 390Ω,1/16W
R106	NRVA02D-1051AY	RESISTOR 1.05kΩ,1/10W
R107	QRD161J-561	RESISTOR 560Ω,1/6W
R108	QRSA08J-750YN	RESISTOR 75Ω,1/10W
R109	QRSA08J-152YN	RESISTOR 1.5kΩ,1/10W
R110	QRSA08J-561YN	RESISTOR 560Ω,1/10W
R111	NRVA62D-471N	RESISTOR 470Ω,1/16W
R112	NRVA62D-471N	RESISTOR 470Ω,1/16W
R113	QRSA08J-153YN	RESISTOR 15kΩ,1/10W
R114	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R115	QRSA08J-391YN	RESISTOR 390Ω,1/10W
R116	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R117	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R118	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R119	QRSA08J-153YN	RESISTOR 15kΩ,1/10W
R120	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R121	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R122	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R123	QRD161J-330	RESISTOR 33Ω,1/6W
R124	QRD161J-820	RESISTOR 82Ω,1/6W
R125	QRSA08J-123YN	RESISTOR 12kΩ,1/10W
R126	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R127	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R128	QRSA08J-471YN	RESISTOR 470Ω,1/10W
R129	QRSA08J-750YN	RESISTOR 75Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R130	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R131	QRSA08J-181YN	RESISTOR, BR-S800	180Ω,1/10W
R132	QRSA08J-152YN	RESISTOR, BR-S800	1.5kΩ,1/10W
R133	QRSA08J-680YN	RESISTOR	68Ω,1/10W
R135	QRSA08J-393YN	RESISTOR, BR-S800	39kΩ,1/10W
R136	QRSA08J-122YN	RESISTOR, BR-S800	1.2kΩ,1/10W
R137	QRSA08J-472YN	RESISTOR, BR-S800	4.7kΩ,1/10W
R138	QRSA08J-103YN	RESISTOR, BR-S800	10kΩ,1/10W
R139	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R140	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R141	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R142	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R144	QRSA08J-362YN	RESISTOR	3.6kΩ,1/10W
R145	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R146	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R147	QVPC624-103Z	V RESISTOR	10kΩ
R148	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R150	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R151	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R152	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R153	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R154	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R155	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R156	QVPC624-501Z	V RESISTOR	500Ω
R157	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R158	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R159	QVPC624-503Z	V RESISTOR	50kΩ
R160	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R161	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R162	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R163	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R164	QVPC625-503Z	V RESISTOR	50kΩ
R165	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R166	QVPC625-503Z	V RESISTOR	50kΩ
R167	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R168	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R169	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R170	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R171	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R172	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R173	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R174	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R175	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R176	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R177	QRSA08J-100YN	RESISTOR	10Ω,1/10W
R178	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R199	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R200	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R201	QVPC625-104Z	V RESISTOR	100kΩ
R202	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R203	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R205	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R206	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R207	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R208	QVPC625-103Z	V RESISTOR	10kΩ
R209	QRSA08J-102YN	RESISTOR	1kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R210	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R211	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R212	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R213	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R214	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R215	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R216	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R217	QVPC625-102Z	V RESISTOR	1kΩ
R218	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R219	QVPC625-103Z	V RESISTOR	10kΩ
R220	QVPC625-103Z	V RESISTOR	10kΩ
R221	QVPC625-103Z	V RESISTOR	10kΩ
R222	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R223	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R224	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R225	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R226	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R227	QRSA08J-753YN	RESISTOR	75kΩ,1/10W
R228	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R229	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R230	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R231	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R232	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R233	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R234	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R236	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R237	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R238	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R239	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R240	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R241	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R242	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R243	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R244	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R245	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R246	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R247	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R248	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R249	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R250	QVPC624-102Z	V RESISTOR	1kΩ
R251	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R252	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R253	QVPC624-102Z	V RESISTOR	1kΩ
R254	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R255	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R256	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R257	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R258	QVPC625-501Z	V RESISTOR	500Ω
R259	QVPC625-501Z	V RESISTOR	500Ω
R261	QRSA08J-181YN	RESISTOR, BR-S800	180Ω,1/10W
R262	QRSA08J-181YN	RESISTOR, BR-S800	180Ω,1/10W
R263	QRSA08J-391YN	RESISTOR, BR-S800	390Ω,1/10W
R264	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R265	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R266	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R267	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R268	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
R269	NRVA62D-102N	RESISTOR 1kΩ,1/16W
R270	QRSA08J-101YN	RESISTOR 100Ω,1/10W
R271	NRVA02D-1151AY	RESISTOR 1.15kΩ,1/10W
R272	QRSA08J-333YN	RESISTOR 33kΩ,1/10W
R273	QRSA08J-822YN	RESISTOR 8.2kΩ,1/10W
R274	QRSA08J-122YN	RESISTOR 1.2kΩ,1/10W
R275	NRVA62D-561N	RESISTOR 560Ω,1/16W
R276	QRSA08J-101YN	RESISTOR 100Ω,1/10W
R277	NRVA62D-222N	RESISTOR 2.2kΩ,1/16W
R281	QRSA08J-152YN	RESISTOR 1.5kΩ,1/10W
R282	QRSA08J-222YN	RESISTOR 2.2kΩ,1/10W
R283	QRSA08J-332YN	RESISTOR 3.3kΩ,1/10W
R284	QRSA08J-104YN	RESISTOR 100kΩ,1/10W
R285	QRSA08J-272YN	RESISTOR 2.7kΩ,1/10W
R286	QRSA08J-0R0Y	RESISTOR 0Ω,1/10W
R287	QRSA08J-152YN	RESISTOR 1.5kΩ,1/10W
R288	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R290	QRSA08J-101YN	RESISTOR, BR-S800 100Ω,1/10W
R292	QRSA08J-331YN	RESISTOR 330Ω,1/10W
R293	QRSA08J-472YN	RESISTOR 4.7kΩ,1/10W
R294	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R295	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R296	QRSA08J-152YN	RESISTOR 1.5kΩ,1/10W
R297	QRSA08J-393YN	RESISTOR 39kΩ,1/10W
R298	QRSA08J-393YN	RESISTOR 39kΩ,1/10W
R299	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R301	QRSA08J-272YN	RESISTOR 2.7kΩ,1/10W
R302	QRSA08J-271YN	RESISTOR 270Ω,1/10W
R303	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R304	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R305	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R306	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R307	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R309	QRSA08J-561YN	RESISTOR 560Ω,1/10W
R310	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R311	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R312	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R313	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R314	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R315	QRSA08J-562YN	RESISTOR 5.6kΩ,1/10W
R316	QRSA08J-0R0Y	RESISTOR 0Ω,1/10W
R317	QRSA08J-223YN	RESISTOR 22kΩ,1/10W
R319	QRSA08J-183YN	RESISTOR, BR-S800 18kΩ,1/10W
R320	QRSA08J-681YN	RESISTOR, BR-S800 680Ω,1/10W
R321	QRSA08J-471YN	RESISTOR, BR-S800 470Ω,1/10W
R322	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R323	QRSA08J-154YN	RESISTOR 150kΩ,1/10W
R324	QRSA08J-390YN	RESISTOR 39Ω,1/10W
R325	QRSA08J-750YN	RESISTOR, BR-S800 75Ω,1/10W
R326	QRSA08J-750YN	RESISTOR, BR-S800 75Ω,1/10W
R327	QRSA08J-750YN	RESISTOR, BR-S800 75Ω,1/10W
R328	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R329	QRSA08J-821YN	RESISTOR 820Ω,1/10W
R331	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R332	QRSA08J-331YN	RESISTOR 330Ω,1/10W
R333	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
R334	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R336	QRSA08J-223YN	RESISTOR 22kΩ,1/10W
R337	QRSA08J-561YN	RESISTOR 560Ω,1/10W
R338	QRSA08J-0R0Y	RESISTOR 0Ω,1/10W
R339	QRD161J-331	RESISTOR 330Ω,1/6W
C1	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C2	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C3	QETC1AM-226	E CAPACITOR, BR-S800 22μF,10V
C4	QETC1AM-226	E CAPACITOR, BR-S800 22μF,10V
C5	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C6	QETC1CM-476	E CAPACITOR, BR-S800 47μF,16V
C7	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C8	QCYA1HK-332	CAPACITOR, S800 0.0033μF,50V
C9	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C10	QCYA1EK-473	CAPACITOR, BR-S800 0.047μF,25V
C11	QETC1EM-475	E CAPACITOR, BR-S800 4.7μF,25V
C12	QETC1EM-475	E CAPACITOR, BR-S800 4.7μF,25V
C13	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C14	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C15	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C16	QETC1CM-476	E CAPACITOR, BR-S800 47μF,16V
C17	QETC1CM-476	E CAPACITOR, BR-S800 47μF,16V
C18	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C20	QETC1CM-106	E CAPACITOR, BR-S800 10μF,16V
C21	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C22	QETC1CM-476	E CAPACITOR, BR-S800 47μF,16V
C23	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C24	QCFA1EZ-104	CAPACITOR, BR-S800 0.1μF,25V
C25	QCTA1CH-390	CAPACITOR, BR-S800 39pF,16V
C26	QCYA1HK-102	CAPACITOR, BR-S800 0.001μF,50V
C27	QCFA1EZ-104	CAPACITOR, BR-S800 0.1μF,25V
C28	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C29	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C30	QCFA1EZ-104	CAPACITOR, BR-S800 0.1μF,25V
C31	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C32	QCTA1CH-100	CAPACITOR, BR-S800 10pF,16V
C33	QCFA1EZ-104	CAPACITOR, BR-S800 0.1μF,25V
C34	QCYA1EK-104	CAPACITOR, BR-S800 0.1μF,25V
C35	QCFA1EZ-104	CAPACITOR, BR-S800 0.1μF,25V
C36	QCFA1EZ-104	CAPACITOR, BR-S800 0.1μF,25V
C37	QCYA1EK-104	CAPACITOR, BR-S800 0.1μF,25V
C38	QCYA1EK-104	CAPACITOR, BR-S800 0.1μF,25V
C39	QETC1AM-476	E CAPACITOR, BR-S800 47μF,10V
C40	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C41	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C42	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C43	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C44	QCTA1CH-680	CAPACITOR, BR-S800 68pF,16V
C45	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C46	QETC1CM-107	E CAPACITOR, BR-S800 100μF,16V
C47	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C48	QETC1CM-476	E CAPACITOR, BR-S800 47μF,16V
C49	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C50	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C51	QCYA1EK-223	CAPACITOR, BR-S800 0.022μF,25V
C52	QCYA1EK-223	CAPACITOR, BR-S800 0.022μF,25V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
C54	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C55	QETC1CM-476	E CAPACITOR, BR-S800 47μF,16V
C56	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C57	QETC1CM-107	E CAPACITOR 100μF,16V
C58	QETC1HM-225	E CAPACITOR, BR-S800 2.2μF,50V
C59	QETC1HM-225	E CAPACITOR 2.2μF,50V
C60	QCYA1EK-103	CAPACITOR 0.01μF,25V
C61	QETC1CM-107	E CAPACITOR 100μF,16V
C62	QETC1HM-105	E CAPACITOR 1μF,50V
C63	QETC1CM-476	E CAPACITOR 47μF,16V
C64	QETC0JM-227	E CAPACITOR 220μF,6.3V
C65	QCYA1EK-103	CAPACITOR 0.01μF,25V
C66	QETC1CM-476	E CAPACITOR 47μF,16V
C67	QCYA1EK-103	CAPACITOR 0.01μF,25V
C68	QCYA1EK-223	CAPACITOR, BR-S800 0.022μF,25V
C69	QCYA1EK-223	CAPACITOR, BR-S800 0.022μF,25V
C70	QCYA1EK-223	CAPACITOR, BR-S800 0.022μF,25V
C71	QCYA1EK-223	CAPACITOR, BR-S800 0.022μF,25V
C72	QCYA1EK-223	CAPACITOR 0.022μF,25V
C73	QCYA1EK-223	CAPACITOR 0.022μF,25V
C74	QCYA1EK-223	CAPACITOR 0.022μF,25V
C75	QCYA1EK-103	CAPACITOR 0.01μF,25V
C76	QETC1CM-476	E CAPACITOR 47μF,16V
C77	QCYA1EK-103	CAPACITOR 0.01μF,25V
C78	QETC1CM-107	E CAPACITOR 100μF,16V
C79	QETC1CM-107	E CAPACITOR 100μF,16V
C80	QETC1HM-105	E CAPACITOR 1μF,50V
C81	QETC1CM-476	E CAPACITOR 47μF,16V
C82	QETC0JM-227	E CAPACITOR 220μF,6.3V
C83	QCYA1EK-103	CAPACITOR 0.01μF,25V
C84	QETC1CM-476	E CAPACITOR 47μF,16V
C85	QCYA1EK-103	CAPACITOR 0.01μF,25V
C86	QCTA1CH-390	CAPACITOR, BR-S800 39pF,16V
C87	QETC1HM-225	E CAPACITOR 2.2μF,50V
C88	QCTA1CH-470	CAPACITOR, BR-S800 47pF,16V
C89	PU57672-200	TRIMMER CAPACITOR 20pF
C90	QCYA1HK-102	CAPACITOR 0.001μF,50V
C91	QCTA1CH-180	CAPACITOR 18pF,16V
C92	QCYA1EK-103	CAPACITOR 0.01μF,25V
C93	QETC1HM-225	E CAPACITOR 2.2μF,50V
C94	QCTA1CH-221	CAPACITOR 220pF,16V
C95	QETC1HM-225	E CAPACITOR 2.2μF,50V
C96	QCYA1EK-103	CAPACITOR 0.01μF,25V
C97	QCTA1CH-471	CAPACITOR 470pF,16V
C98	QCYA1EK-104	CAPACITOR 0.1μF,25V
C99	QETC1HM-105	E CAPACITOR 1μF,50V
C100	QCYA1HK-153	CAPACITOR 0.015μF,50V
C101	QETC1EM-475	E CAPACITOR 4.7μF,25V
C103	QETC0JM-337	E CAPACITOR 330μF,6.3V
C105	QETC0JM-337	E CAPACITOR 330μF,6.3V
C106	QCTA1CH-470	CAPACITOR 47pF,16V
C107	QETC1EM-475	E CAPACITOR 4.7μF,25V
C108	QCYA1EK-103	CAPACITOR 0.01μF,25V
C109	QETC1AM-476	E CAPACITOR 47μF,10V
C111	QCYA1EK-103	CAPACITOR 0.01μF,25V
C112	QCYA1EK-103	CAPACITOR 0.01μF,25V
C113	QETC1HM-105	E CAPACITOR 1μF,50V
C114	QCYA1EK-103	CAPACITOR 0.01μF,25V
C115	QCYA1EK-103	CAPACITOR 0.01μF,25V
C116	QCYA1EK-103	CAPACITOR 0.01μF,25V
C117	QCYA1EK-103	CAPACITOR 0.01μF,25V
C118	QCYA1EK-103	CAPACITOR 0.01μF,25V
C119	QCYA1EK-103	CAPACITOR 0.01μF,25V
C120	QCYA1EK-223	CAPACITOR 0.022μF,25V
C121	QETC1AM-107	E CAPACITOR 100μF,10V
C122	QCYA1EK-103	CAPACITOR 0.01μF,25V
C123	QCYA1EK-103	CAPACITOR 0.01μF,25V
C124	QCYA1EK-103	CAPACITOR 0.01μF,25V
C125	QCYA1EK-103	CAPACITOR 0.01μF,25V
C126	QETC1EM-475	E CAPACITOR 4.7μF,25V
C127	QETC1EM-475	E CAPACITOR 4.7μF,25V
C128	QCYA1EK-103	CAPACITOR, BR-S800 0.01μF,25V
C129	QETC1HM-224	CAPACITOR 0.22μF,50V
C130	QCYA1EK-103	CAPACITOR 0.01μF,25V
C131	QCYA1EK-103	CAPACITOR 0.01μF,25V
C132	QCTA1CH-120	CAPACITOR 12pF,16V
C133	QCYA1EK-103	CAPACITOR 0.01μF,25V
C134	QETC1EM-475	E CAPACITOR 4.7μF,25V
C135	QCYA1EK-103	CAPACITOR 0.01μF,25V
C136	QETC1EM-475	E CAPACITOR 4.7μF,25V
C137	QETC1HM-105	E CAPACITOR 1μF,50V
C138	QCYA1EK-103	CAPACITOR 0.01μF,25V
C139	QCYA1EK-103	CAPACITOR 0.01μF,25V
C140	QCYA1EK-103	CAPACITOR 0.01μF,25V
C141	QCYA1EK-103	CAPACITOR 0.01μF,25V
C142	QCYA1EK-103	CAPACITOR 0.01μF,25V
C143	QETC1CM-106	E CAPACITOR 10μF,16V
C144	QCYA1HK-472	CAPACITOR 0.0047μF,50V
C145	QCYA1EK-103	CAPACITOR 0.01μF,25V
C146	QCYA1EK-103	CAPACITOR 0.01μF,25V
C147	QETC1CM-106	E CAPACITOR 10μF,16V
C157	QETC1CM-476	E CAPACITOR 47μF,16V
C158	QCYA1EK-103	CAPACITOR 0.01μF,25V
C159	QCYA1EK-103	CAPACITOR 0.01μF,25V
C160	QCYA1EK-683	CAPACITOR 0.068μF,25V
C161	QCYA1HK-273	CAPACITOR 0.027μF,50V
C163	QETC1AM-107	E CAPACITOR 100μF,10V
C164	QCYA1EK-103	CAPACITOR 0.01μF,25V
C165	QETC1AM-107	E CAPACITOR 100μF,10V
C166	QCYA1EK-103	CAPACITOR 0.01μF,25V
C167	QCYA1EK-103	CAPACITOR 0.01μF,25V
C168	QCYA1EK-103	CAPACITOR 0.01μF,25V
C169	QCTA1CH-270	CAPACITOR 27pF,16V
C170	QCTA1CH-680	CAPACITOR 68pF,16V
C171	QCYA1EK-103	CAPACITOR 0.01μF,25V
C172	QCYA1EK-103	CAPACITOR 0.01μF,25V
C173	QETC1AM-107	E CAPACITOR 100μF,10V
C174	QCYA1EK-103	CAPACITOR 0.01μF,25V
C176	QCYA1EK-683	CAPACITOR 0.068μF,25V
C177	QCYA1EK-103	CAPACITOR 0.01μF,25V
C178	QCTA1CH-680	CAPACITOR 68pF,16V
C179	QCTA1CH-270	CAPACITOR 27pF,16V
C180	QCYA1EK-104	CAPACITOR 0.1μF,25V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C181	QCYA1EK-683	CAPACITOR	0.068 μ F,25V
	C182	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C183	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C184	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C185	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C186	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C187	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C188	QCTA1CH-151	CAPACITOR	150pF,16V
	C189	QCTA1CH-471	CAPACITOR	470pF,16V
	C190	QCYA1HK-153	CAPACITOR	0.015 μ F,50V
	C191	QETC1HM-105	E CAPACITOR	1 μ F,50V
	C192	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C193	QCYA1EK-473	CAPACITOR	0.047 μ F,25V
	C194	QCYA1EK-473	CAPACITOR	0.047 μ F,25V
	C195	QCYA1EK-473	CAPACITOR	0.047 μ F,25V
	C196	QCYA1EK-473	CAPACITOR	0.047 μ F,25V
	C197	QCYA1EK-683	CAPACITOR	0.068 μ F,25V
	C198	QCTA1CH-151	CAPACITOR	150pF,16V
	C200	QETC1AM-476	E CAPACITOR	47 μ F,10V
	C201	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C202	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C203	QCYA1EK-104	CAPACITOR	0.1 μ F,25V
	C205	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C206	QCYA1EK-223	CAPACITOR	0.022 μ F,25V
	C207	QCYA1EK-223	CAPACITOR	0.022 μ F,25V
	C208	QCTA1CH-8R0	CAPACITOR	8pF,16V
	C209	QETC1CM-476	E CAPACITOR	47 μ F,16V
	C210	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C211	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C212	QETC1CM-476	E CAPACITOR	47 μ F,16V
	C213	QETC1CM-476	E CAPACITOR	47 μ F,16V
	C214	QETC1CM-476	E CAPACITOR	47 μ F,16V
	C215	QETC1CM-107	E CAPACITOR	100 μ F,16V
	C216	QETC1CM-107	E CAPACITOR	100 μ F,16V
	C217	QCTA1CH-270	CAPACITOR	27pF,16V
	C218	QETC1CM-107	E CAPACITOR	100 μ F,16V
	C219	QCTA1CH-270	CAPACITOR	27pF,16V
	C221	QCTA1CH-270	CAPACITOR	27pF,16V
	C222	QCTA1CH-391	CAPACITOR	390pF,16V
	C223	QCYA1EK-223	CAPACITOR	0.022 μ F,25V
	C224	QETC1CM-106	E CAPACITOR	10 μ F,16V
	C225	QETC1CM-106	E CAPACITOR	10 μ F,16V
	C226	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C227	QETC1CM-476	E CAPACITOR	47 μ F,16V
	C228	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C232	QCYA1HK-183	CAPACITOR	0.018 μ F,50V
	C234	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C235	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C236	QCTA1CH-101	CAPACITOR	100pF,16V
	C237	QCYA1HK-102	CAPACITOR	0.001 μ F,50V
	C239	QCTA1CH-331	CAPACITOR	330pF,16V
	C240	QCYA1EK-223	CAPACITOR	0.022 μ F,25V
	C241	QCTA1CH-560	CAPACITOR	56pF,16V
	C242	QCYA1EK-223	CAPACITOR	0.022 μ F,25V
	C243	QCTA1CH-101	CAPACITOR	100pF,16V
	C244	QCYA1EK-103	CAPACITOR	0.01 μ F,25V
	C247	QCYA1HK-102	CAPACITOR	0.001 μ F,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	L2	PU48530-101J	COIL, BR-S800	100 μ H
	L3	PU48530-221J	COIL, BR-S800	220 μ H
	L4	PU48530-101J	COIL, BR-S800	100 μ H
	L5	PU48530-221J	COIL, BR-S800	220 μ H
	L6	PU48530-221J	COIL, BR-S800	220 μ H
	L7	PU48530-221J	COIL	220 μ H
	L8	PU48530-221J	COIL	220 μ H
	L9	PU48530-221J	COIL	220 μ H
	L10	PU48530-2R2J	COIL, BR-S800	2.2 μ H
	L11	PU48530-470J	COIL	47 μ H
	L14	PU48530-180J	COIL	18 μ H
	L16	PU48530-101J	COIL	100 μ H
	L17	PU48530-471J	COIL	470 μ H
	L18	PU48530-330J	COIL	33 μ H
	L19	PU48530-101J	COIL	100 μ H
	L20	PU48530-221J	COIL	220 μ H
	L22	PU48530-680J	COIL	68 μ H
	L23	PU48530-270J	COIL	27 μ H
	L24	PU48530-270J	COIL	27 μ H
	L25	PU48530-680J	COIL	68 μ H
	L26	PU48530-101J	COIL	100 μ H
	L27	PU48530-101J	COIL	100 μ H
	L29	PU48530-221J	COIL	220 μ H
	L30	PU48530-221J	COIL	220 μ H
	L33	YU41134-180J	COIL	18 μ H
	LPF1	PELN0320	LOW PASS FILTER, BR-S800	
	LPF2	PELN0321	LOW PASS FILTER, BR-S800	
	LPF3	PELN0321	LOW PASS FILTER, BR-S800	
	BPF1	PU61058	BAND PASS FILTER	
	BPF2	PGZ01943	BAND PASS FILTER	
	BPF3	PELN0343	BAND PASS FILTER	
⚠	X1	PEVB0347	CRYSTAL RESONATOR	
	SW1	PU54440	SWITCH	
⚠	K1	PGZ00627Z	FERRATE BEADS, BR-S800	
⚠	K2	PGZ00627Z	FERRATE BEADS, BR-S800	
⚠	K3	PGZ00627Z	FERRATE BEADS, BR-S800	
⚠	K4	PGZ00627Z	FERRATE BEADS, BR-S800	
	TH2	ERT-D2FGL102S	THERMISTOR	
	TH3	ERT-D2FGL102S	THERMISTOR	
	SPC1	PGZ01128-02	SPACER, ×2	
	SPC2	PRD30030-125	PAD, BR-S800 (FOR LPF2)	
	TP1	SQMX001-001Z	TEST PIN, ×17	

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
CN1	PGZ01937-44	MALE CONNECTOR
CN2	PGZ01937-44	MALE CONNECTOR

VIDEO-2 BOARD ASSEMBLY <11>

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
PWBA	PRK20228A-01	VIDEO-2 BOARD ASSY, BR-S800
PWBA	PRK20228B-01	VIDEO-2 BOARD ASSY, BR-S500
IC1	TL8825F-XE	IC
IC2	VC2076MP-XE	IC
IC3	TC74HC04AF	IC
IC4	JCP0032-HT	IC
IC5	CXL5509M	IC
IC8	TC4S30F	IC
IC9	M5278L09	IC
Q1	2SC2412K(RS)	TRANSISTOR
Q2	2SC2412K(RS)	TRANSISTOR
Q3	2SA1037K(QR)	TRANSISTOR
Q4	2SA1037K(QR)	TRANSISTOR
Q5	2SC2412K(RS)	TRANSISTOR
Q6	2SC2412K(RS)	TRANSISTOR
Q7	2SA1037K(QR)	TRANSISTOR
Q8	2SA1037K(QR)	TRANSISTOR
Q9	2SC2412K(RS)	TRANSISTOR
Q10	2SC2412K(RS)	TRANSISTOR
Q11	DTC124EK	TRANSISTOR
Q12	2SC2412K(RS)	TRANSISTOR, BR-S800
Q13	2SC2412K(RS)	TRANSISTOR, BR-S800
Q14	2SA1037K(QR)	TRANSISTOR, BR-S800
Q15	2SC2412K(RS)	TRANSISTOR, BR-S800
Q16	2SC2412K(RS)	TRANSISTOR, BR-S800
Q17	2SC2412K(RS)	TRANSISTOR, BR-S800
Q18	2SA1037K(QR)	TRANSISTOR, BR-S800
Q19	2SC2412K(RS)	TRANSISTOR, BR-S800
Q20	2SC2412K(RS)	TRANSISTOR
Q21	2SC2412K(RS)	TRANSISTOR
Q22	DTC144EK	TRANSISTOR
Q23	2SC2412K(RS)	TRANSISTOR
Q24	2SC2412K(RS)	TRANSISTOR
Q25	2SC2412K(RS)	TRANSISTOR
Q27	2SA1037K(QR)	TRANSISTOR
Q28	DTC144EK	TRANSISTOR, BR-S800
Q29	2SC2412K(RS)	TRANSISTOR, BR-S800
Q30	2SA1037K(QR)	TRANSISTOR, BR-S800
Q31	2SC2412K(RS)	TRANSISTOR, BR-S800
Q32	2SA1037K(QR)	TRANSISTOR
Q33	DTA124EK	TRANSISTOR
Q34	2SC2412K(RS)	TRANSISTOR
Q35	2SA1037K(QR)	TRANSISTOR
Q36	2SC2412K(RS)	TRANSISTOR
Q38	DTC124EK	TRANSISTOR
Q39	2SC2412K(RS)	TRANSISTOR
Q41	DTC124EK	TRANSISTOR
Q42	DTC144WK	TRANSISTOR
Q43	DTC144EK	TRANSISTOR
Q44	DTC144EK	TRANSISTOR
Q45	2SC2412K(RS)	TRANSISTOR
Q46	DTC144EK	TRANSISTOR
Q47	DTC144EK	TRANSISTOR
Q48	DTC144EK	TRANSISTOR
Q49	2SA1037K(QR)	TRANSISTOR
Q50	DTC144EK	TRANSISTOR
Q51	2SC2412K(RS)	TRANSISTOR
Q52	2SC2412K(RS)	TRANSISTOR
Q53	2SC2412K(RS)	TRANSISTOR
Q54	2SC2412K(RS)	TRANSISTOR
Q55	DTC144EK	TRANSISTOR
Q56	DTC144EK	TRANSISTOR
Q57	2SC2412K(RS)	TRANSISTOR
Q58	DTC144EK	TRANSISTOR
Q59	2SA1037K(QR)	TRANSISTOR
Q60	2SA1037K(QR)	TRANSISTOR
Q61	2SC2412K(RS)	TRANSISTOR
Q62	2SC2412K(RS)	TRANSISTOR
Q65	2SC2412K(RS)	TRANSISTOR
Q66	2SA1037K(QR)	TRANSISTOR
Q67	2SC2412K(RS)	TRANSISTOR
Q69	2SC2412K(RS)	TRANSISTOR
Q72	2SC2412K(RS)	TRANSISTOR
Q73	2SC2412K(RS)	TRANSISTOR
Q74	2SC2412K(RS)	TRANSISTOR
Q75	2SC2412K(RS)	TRANSISTOR
Q76	2SC2412K(RS)	TRANSISTOR
Q77	2SC2412K(RS)	TRANSISTOR
Q78	2SC2412K(RS)	TRANSISTOR
Q79	2SA1037K(QR)	TRANSISTOR
Q80	2SC2412K(RS)	TRANSISTOR
Q81	2SC2412K(RS)	TRANSISTOR
Q82	2SA1037K(QR)	TRANSISTOR
Q83	2SC2412K(RS)	TRANSISTOR
Q84	2SC2412K(RS)	TRANSISTOR
Q85	2SA1037K(QR)	TRANSISTOR
Q86	2SC2412K(RS)	TRANSISTOR
Q87	2SA1037K(QR)	TRANSISTOR
Q88	2SC2412K(RS)	TRANSISTOR
Q89	2SD601A(QR)	TRANSISTOR, BR-S800
Q90	2SB709A(QR)	TRANSISTOR, BR-S800
Q91	DTC144EK	TRANSISTOR, BR-S800
Q92	DTC144EK	TRANSISTOR, BR-S800
Q93	2SD601A(QR)	TRANSISTOR, BR-S800
Q96	2SA1037K(QR)	TRANSISTOR
Q97	2SA1037K(QR)	TRANSISTOR
Q101	2SC2412K(RS)	TRANSISTOR
Q102	2SA1037K(QR)	TRANSISTOR
Q103	2SC2412K(RS)	TRANSISTOR
Q104	2SA1037K(QR)	TRANSISTOR
Q105	2SC2412K(RS)	TRANSISTOR

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#⚠REF No.	PART No.	PART NAME, DESCRIPTION
Q106	DTC144EK	TRANSISTOR
Q107	DTC144EK	TRANSISTOR
Q110	DTC144EK	TRANSISTOR
Q111	DTC114EK	TRANSISTOR
Q112	2SC2412K(RS)	TRANSISTOR
Q113	2SA1037K(QR)	TRANSISTOR
Q114	2SC2412K(RS)	TRANSISTOR
Q115	2SC2412K(RS)	TRANSISTOR
Q116	DTC144EK	TRANSISTOR
Q117	DTC144EK	TRANSISTOR
Q118	DTA144EK	TRANSISTOR
Q119	2SC2412K(RS)	TRANSISTOR
Q120	2SC2412K(RS)	TRANSISTOR
Q121	2SA1037K(QR)	TRANSISTOR
Q122	DTC144EK	TRANSISTOR
D1	1SS99	DIODE
D2	1SS99	DIODE
D3	DAN202K	DIODE
D4	DAN202K	DIODE
D5	DAN202K	DIODE
D6	DAN202K	DIODE
D7	DAN202K	DIODE
D11	DAN202K	DIODE
D14	1SS133	DIODE
D15	1SS133	DIODE
D17	DAN202K	DIODE
D18	DAN202K	DIODE
D19	DAN202K	DIODE
D20	DAP202K	DIODE
D22	1SS99	DIODE
D23	1SS99	DIODE
D24	1SS99	DIODE
D25	DAN202K	DIODE
D27	DAP202K	DIODE
D28	1SS133	DIODE
D29	1SS133	DIODE
D30	1SS133	DIODE, BR-S800
D31	1SS133	DIODE
R1	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R2	QRSA08J-332YN	RESISTOR 3.3kΩ,1/10W
R3	QRSA08J-472YN	RESISTOR 4.7kΩ,1/10W
R4	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R5	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R6	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R7	QRSA08J-471YN	RESISTOR 470Ω,1/10W
R8	QRSA08J-272YN	RESISTOR 2.7kΩ,1/10W
R9	QRSA08J-100YN	RESISTOR 10Ω,1/10W
R10	QRSA08J-821YN	RESISTOR 820Ω,1/10W
R11	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R12	QVPC624-501Z	V RESISTOR 500Ω
R13	QRSA08J-511YN	RESISTOR 510Ω,1/10W
R14	QRSA08J-471YN	RESISTOR 470Ω,1/10W
R15	QRSA08J-471YN	RESISTOR 470Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
R16	QRSA08J-471YN	RESISTOR 470Ω,1/10W
R17	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R18	NRVA62D-272N	RESISTOR 2.7kΩ,1/16W
R19	NRVA62D-332N	RESISTOR 3.3kΩ,1/16W
R20	NRVA62D-151N	CMF RESISTOR 150Ω,1/16W
R21	NRVA62D-162N	CMF RESISTOR 1.6kΩ,1/16W
R22	NRVA62D-391N	CMF RESISTOR 390Ω,1/16W
R23	NRVA62D-102N	RESISTOR 1kΩ,1/16W
R24	NRVA62D-102N	RESISTOR 1kΩ,1/16W
R25	NRVA62D-102N	RESISTOR 1kΩ,1/16W
R26	NRVA62D-152N	RESISTOR 1.5kΩ,1/16W
R27	NRVA62D-471N	RESISTOR 470Ω,1/16W
R28	NRVA62D-332N	RESISTOR 3.3kΩ,1/16W
R29	NRVA62D-332N	RESISTOR 3.3kΩ,1/16W
R30	NRVA62D-561N	RESISTOR 560Ω,1/16W
R31	QVPC624-102Z	V RESISTOR, BR-S800 1kΩ
R32	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R33	QRSA08J-122YN	RESISTOR 1.2kΩ,1/10W
R34	QRSA08J-392YN	RESISTOR 3.9kΩ,1/10W
R35	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R36	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R37	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R38	QRSA08J-102YN	RESISTOR 1kΩ,1/10W
R39	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R40	QRSA08J-103YN	RESISTOR 10kΩ,1/10W
R41	QVPC625-201Z	V REISITOR, BR-S800 200Ω
R42	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R43	QRSA08J-242YN	RESISTOR 2.4kΩ,1/10W
R44	QRSA08J-391YN	RESISTOR 390Ω,1/10W
R45	QRSA08J-561YN	RESISTOR, BR-S800 560Ω,1/10W
R46	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R47	QRSA08J-183YN	RESISTOR, BR-S800 18kΩ,1/10W
R48	QRSA08J-103YN	RESISTOR, BR-S800 10kΩ,1/10W
R49	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R50	QRSA08J-561YN	RESISTOR, BR-S800 560Ω,1/10W
R51	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R52	QRSA08J-561YN	RESISTOR, BR-S800 560Ω,1/10W
R53	QRSA08J-471YN	RESISTOR, BR-S800 470Ω,1/10W
R54	QVPC624-501Z	V RESISTOR, BR-S800 500Ω
R55	QRSA08J-101YN	RESISTOR, BR-S800 100Ω,1/10W
R56	QRSA08J-222YN	RESISTOR, BR-S800 2.2kΩ,1/10W
R57	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R58	QRSA08J-151YN	RESISTOR, BR-S800 150Ω,1/10W
R59	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R60	QRSA08J-103YN	RESISTOR, BR-S800 10kΩ,1/10W
R61	QRSA08J-103YN	RESISTOR, BR-S800 10kΩ,1/10W
R62	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R63	QVPC624-501Z	V RESISTOR, BR-S800 500Ω
R64	QRSA08J-331YN	RESISTOR, BR-S800 330Ω,1/10W
R65	QRSA08J-562YN	RESISTOR, BR-S800 5.6kΩ,1/10W
R66	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R67	QRSA08J-181YN	RESISTOR, BR-S800 180Ω,1/10W
R68	QRSA08J-561YN	RESISTOR, BR-S800 560Ω,1/10W
R69	QRSA08J-102YN	RESISTOR, BR-S800 1kΩ,1/10W
R70	QRSA08J-561YN	RESISTOR, BR-S800 560Ω,1/10W
R71	QRSA08J-471YN	RESISTOR, BR-S800 470Ω,1/10W
R72	QVPC624-501Z	V RESISTOR, BR-S800 500Ω

#△REF No.	PART No.	PART NAME, DESCRIPTION	
R73	QRSA08J-101YN	RESISTOR, BR-S800	100Ω,1/10W
R74	QRSA08J-222YN	RESISTOR, BR-S800	2.2kΩ,1/10W
R75	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R76	QRSA08J-151YN	RESISTOR, BR-S800	150Ω,1/10W
R77	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R78	QRSA08J-103YN	RESISTOR, BR-S800	10kΩ,1/10W
R79	QRSA08J-103YN	RESISTOR, BR-S800	10kΩ,1/10W
R80	QRSA08J-181YN	RESISTOR, BR-S800	180Ω,1/10W
R81	QVPC624-501Z	V RESISTOR,BR-S800	500Ω
R82	QRSA08J-331YN	RESISTOR, BR-S800	330Ω,1/10W
R83	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R84	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R85	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R86	QVPC624-202Z	V RESISTOR	2kΩ
R87	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R88	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R89	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R90	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R91	QRSA08J-560YN	RESISTOR	56Ω,1/10W
R92	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R93	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R94	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R95	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R96	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R97	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R98	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R99	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R101	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R103	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R104	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R106	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R109	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R110	QRSA08J-161YN	RESISTOR, BR-S800	160Ω,1/10W
R111	QRSA08J-681YN	RESISTOR, BR-S800	680Ω,1/10W
R112	QRSA08J-101YN	RESISTOR, BR-S800	100Ω,1/10W
R113	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R114	QRSA08J-391YN	RESISTOR, BR-S800	390Ω,1/10W
R115	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R116	QRSA08J-391YN	RESISTOR, BR-S800	390Ω,1/10W
R117	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R119	QRSA08J-183YN	RESISTOR, BR-S800	18kΩ,1/10W
R121	QVPC624-502Z	V RESISTOR, BR-S800	5kΩ
R122	NRVA62D-104N	RESISTOR, BR-S800	100kΩ,1/16W
R123	NRVA62D-152N	RESISTOR, BR-S800	1.5kΩ,1/16W
R124	QVPC624-103Z	V RESISTOR, BR-S800	10kΩ
R125	QRSA08J-392YN	RESISTOR, BR-S800	3.9kΩ,1/10W
R126	QVPC624-103Z	V RESISTOR, BR-S800	10kΩ
R127	NRVA62D-822N	RESISTOR, BR-S800	8.2kΩ,1/16W
R128	QVPC624-502Z	V RESISTOR, BR-S800	5kΩ
R129	NRVA62D-562N	RESISTOR, BR-S800	5.6kΩ,1/16W
R130	NRVA62D-183N	RESISTOR, BR-S800	18kΩ,1/16W
R131	NRVA62D-822N	RESISTOR, BR-S800	8.2kΩ,1/16W
R132	QVPC624-302Z	V RESISTOR, BR-S800	3kΩ
R133	NRVA62D-392N	RESISTOR, BR-S800	3.9kΩ,1/16W
R134	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R135	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R136	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W

#△REF No.	PART No.	PART NAME, DESCRIPTION	
R137	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R138	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R139	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R140	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R141	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R142	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R145	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R146	QVPC624-503Z	V RESISTOR, BR-S800	50kΩ
R147	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R148	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R149	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R150	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R151	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R152	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R153	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R154	NRVA62D-152N	RESISTOR	1.5kΩ,1/16W
R155	NRVA62D-391N	CMF RESISTOR	390Ω,1/16W
R157	NRVA62D-152N	RESISTOR	1.5kΩ,1/16W
R158	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R160	NRVA62D-512N	RESISTOR	5.1kΩ,1/16W
R162	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R163	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R164	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R165	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R166	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R167	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R168	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R169	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R170	NRVA62D-562N	RESISTOR	5.6kΩ,1/16W
R171	QVPC625-502Z	V RESISTOR	5kΩ
R172	NRVA62D-243N	RESISTOR	24kΩ,1/16W
R173	NRVA62D-123N	RESISTOR	12kΩ,1/16W
R174	QVPC625-203Z	V RESISTOR	20kΩ
R175	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R176	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R177	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R178	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R179	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R180	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R181	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R182	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R183	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R184	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R185	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R186	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R187	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R188	QVPC625-502Z	V RESISTOR	5kΩ
R189	QVPC625-502Z	V RESISTOR	5kΩ
R190	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R191	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R192	QRSA08J-0R0YN	RESISTOR	0Ω,1/10W
R193	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R194	QRSA08J-0R0YN	RESISTOR	0Ω,1/10W
R195	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R196	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R197	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R198	QRSA08J-393YN	RESISTOR	39kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R199	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R200	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R201	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R202	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R203	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R205	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R206	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R207	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R208	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R209	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R210	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R211	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R212	QVPC625-202Z	V RESISTOR	2kΩ
R213	QVPC625-202Z	V RESISTOR	2kΩ
R214	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R215	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R216	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R217	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R218	QVPC625-202Z	V RESISTOR	2kΩ
R219	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R220	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R221	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R222	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R223	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R224	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R225	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R226	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R227	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R228	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R229	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R230	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R231	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R232	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R233	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R234	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R235	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R242	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R243	QVPC624-102Z	V RESISTOR	1kΩ
R244	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R245	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R246	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R247	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R248	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R249	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R250	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R251	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R252	QVPC625-103Z	V RESISTOR	10kΩ
R254	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R255	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R256	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R257	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R258	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R265	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R266	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R267	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R268	QRSA08J-181YN	RESISTOR	180Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R269	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R270	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R271	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R272	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R273	QVPC624-501Z	V RESISTOR	500Ω
R274	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R275	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R276	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R277	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R278	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R279	QVPC624-502Z	V RESISTOR	5kΩ
R281	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R282	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R283	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R284	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R285	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R286	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R287	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R288	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R289	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R290	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R291	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R292	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R293	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
R294	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R295	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R296	QRSA08J-560YN	RESISTOR	56Ω,1/10W
R297	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R298	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R299	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R300	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R301	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R302	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R303	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R304	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R305	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R306	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R308	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R309	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R310	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R311	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R312	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R313	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R314	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R315	QRSA08J-393YN	RESISTOR, BR-S800	39kΩ,1/10W
R316	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R317	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R318	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R319	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R320	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R321	QRSA08J-561YN	RESISTOR, BR-S800	560Ω,1/10W
R322	QRSA08J-561YN	RESISTOR, BR-S800	560Ω,1/10W
R331	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R332	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R334	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R335	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R336	QRSA08J-103YN	RESISTOR	10kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R337	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R338	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R340	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R343	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R344	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R345	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R346	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R356	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R357	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R358	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R359	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R360	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R361	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R362	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R363	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R364	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R365	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R366	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R367	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R368	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R369	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R371	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R372	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R374	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R376	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R377	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R378	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R382	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R383	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R384	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R385	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R386	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R387	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R388	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R389	QVPC624-103Z	RESISTOR	10kΩ
R390	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R391	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R392	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R393	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R394	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R395	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R396	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R397	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R398	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R399	QRSA08J-561YN	RESISTOR, BR-S500	560Ω,1/10W
R400	QRSA08J-560YN	RESISTOR, BR-S500	56Ω,1/10W
R401	QRSA08J-331YN	RESISTOR, BR-S500	330Ω,1/10W
R402	QRSA08J-181YN	RESISTOR, BR-S800	180Ω,1/10W
R403	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R404	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R405	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R406	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R407	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R408	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R409	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R410	QRSA08J-102YN	RESISTOR	1kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R411	QRSA08J-270YN	RESISTOR	27Ω,1/10W
R413	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R414	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R415	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R416	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R417	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R418	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R419	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R420	QRSA08J-0R0Y	RESISTOR, BR-S500	0Ω,1/10W
R426	QRD161J-394	RESISTOR, BR-S800	390kΩ,1/6W
R427	QRD161J-103	RESISTOR	10kΩ,1/6W
C1	QCYA1EK-103	CAPACITOR	0.01μF,25V
C2	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
C3	QCYA1EK-103	CAPACITOR	0.01μF,25V
C4	QCYA1EK-103	CAPACITOR	0.01μF,25V
C5	QETC1AM-476	E CAPACITOR	47μF,10V
C6	QETC1CM-106	E CAPACITOR	10μF,16V
C7	QCYA1EK-103	CAPACITOR	0.01μF,25V
C8	QCYA1EK-103	CAPACITOR	0.01μF,25V
C9	QETC1EM-475	E CAPACITOR	4.7μF,25V
C10	QETC1HM-474	E CAPACITOR	0.47μF,50V
C11	QEE81EM-475	E CAPACITOR	4.7μF,25V
C12	QETC1HM-105	E CAPACITOR	1μF,50V
C13	QCYA1EK-103	CAPACITOR	0.01μF,25V
C14	QCYA1EK-103	CAPACITOR	0.01μF,25V
C15	QCYA1EK-103	CAPACITOR	0.01μF,25V
C16	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C17	QCYA1EK-103	CAPACITOR	0.01μF,25V
C18	QETC1CM-106	E CAPACITOR	10μF,16V
C19	QCYA1EK-103	CAPACITOR	0.01μF,25V
C20	QETC1AM-476	E CAPACITOR	47μF,10V
C21	QETC1AM-107	E CAPACITOR	100μF,10V
C22	QCTA1CH-301	CAPACITOR	300pF,16V
C23	QCTA1CH-301	CAPACITOR	300pF,16V
C24	QCTA1CH-181	CAPACITOR	180pF,16V
C25	QCTA1CH-101	CAPACITOR	100pF,16V
C26	QCTA1CH-271	CAPACITOR	270pF,16V
C27	QCTA1CH-820	CAPACITOR	82pF,16V
C28	QCTA1CH-221	CAPACITOR	220pF,16V
C29	QCTA1CH-301	CAPACITOR	300pF,16V
C30	QCTA1CH-301	CAPACITOR	300pF,16V
C31	QCTA1CH-100	CAPACITOR	10pF,16V
C32	QETC1AM-476	E CAPACITOR	47μF,10V
C33	QETC1EM-335	E CAPACITOR	3.3μF,25V
C34	QETC1HM-225	E CAPACITOR	2.2μF,50V
C35	QETC1HM-225	E CAPACITOR	2.2μF,50V
C36	QCTA1CH-680	CAPACITOR	68pF,16V
C37	QETC1AM-226	E CAPACITOR	22μF,10V
C38	QETC1AM-107	E CAPACITOR	100μF,10V
C39	QETC1AM-476	E CAPACITOR	47μF,10V
C40	QCYA1EK-103	CAPACITOR, BR-S800	0.01μF,25V
C41	QCYA1EK-103	CAPACITOR, BR-S800	0.01μF,25V
C42	QCTA1CH-101	CAPACITOR, BR-S800	100pF,16V
C43	QCYA1EK-223	CAPACITOR, BR-S800	0.022μF,25V
C44	QCYA1HK-183	CAPACITOR, BR-S800	0.018μF,50V
C45	QCTA1CH-180	CAPACITOR, BR-S800	18pF,16V

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#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C46	QCTA1CH-220	CAPACITOR, BR-S800	22pF,16V
C47	QCYA1HK-102	CAPACITOR, BR-S800	0.001µF,16V
C48	QCTA1CH-331	CAPACITOR, BR-S800	330pF,16V
C49	QCYA1EK-223	CAPACITOR, BR-S800	0.022µF,25V
C50	QCYA1EK-223	CAPACITOR, BR-S800	0.022µF,25V
C51	QCYA1EK-223	CAPACITOR, BR-S800	0.022µF,25V
C52	QCTA1CH-151	CAPACITOR, BR-S800	150pF,16V
C53	QCTA1CH-330	CAPACITOR, BR-S800	33pF,16V
C54	QCTA1CH-151	CAPACITOR, BR-S800	150pF,16V
C55	QETC1CM-476	E CAPACITOR, BR-S800	47µF,16V
C56	QCYA1EK-103	CAPACITOR, BR-S800	0.01µF,25V
C57	QCYA1EK-103	CAPACITOR, BR-S800	0.01µF,25V
C58	QCYA1EK-103	CAPACITOR	0.01µF,25V
C59	QCYA1EK-103	CAPACITOR	0.01µF,25V
C60	QCYA1EK-104	CAPACITOR	0.1µF,25V
C61	QETC1AM-107	E CAPACITOR	100µF,10V
C62	QCYA1HK-682	CAPACITOR	0.0068µF,50V
C63	QCTA1CH-330	CAPACITOR	33pF,16V
C64	QCYA1EK-473	CAPACITOR	0.047µF,25V
C65	QCYA1EK-104	CAPACITOR	0.1µF,25V
C69	QETC1CM-476	E CAPACITOR	47µF,16V
C70	QCYA1EK-103	CAPACITOR	0.01µF,25V
C71	QCYA1EK-103	CAPACITOR	0.01µF,25V
C72	QCYA1EK-104	CAPACITOR, BR-S800	0.1µF,25V
C73	QCTA1CH-121	CAPACITOR, BR-S800	120pF,16V
C74	QCYA1EK-104	CAPACITOR, BR-S800	0.1µF,25V
C75	QCYA1EK-104	CAPACITOR, BR-S800	0.1µF,25V
C76	QCYA1EK-104	CAPACITOR, BR-S800	0.1µF,25V
C77	QETC1CM-476	E CAPACITOR	47µF,16V
C78	QCYA1EK-103	CAPACITOR	0.01µF,25V
C79	QCYA1EK-103	CAPACITOR	0.01µF,25V
C80	QCTA1CH-4R0	CAPACITOR, BR-S800	4pF,16V
C81	QCTA2CH-181	CAPACITOR, BR-S800	180pF,160V
C82	QETC1HM-474	E CAPACITOR	0.47µF,50V
C83	QETC1HM-474	E CAPACITOR	0.47µF,50V
C84	QETC1CM-226	E CAPACITOR	22µF,16V
C85	QETC1CM-477	E CAPACITOR	470µF,16V
C86	QCYA1EK-103	CAPACITOR	0.01µF,25V
C87	QCYA1EK-103	CAPACITOR	0.01µF,25V
C88	QETC1HM-474	E CAPACITOR	0.47µF,50V
C89	QETC1HM-474	E CAPACITOR	0.47µF,50V
C90	QETC1EM-475	E CAPACITOR	4.7µF,25V
C91	QETC1AM-226	E CAPACITOR, BR-S800	22µF,10V
C92	QCTA1CH-820	CAPACITOR	82pF,16V
C93	QETC1AM-226	E CAPACITOR	22µF,10V
C94	QETC1AM-476	E CAPACITOR	47µF,10V
C95	QCYA1EK-103	CAPACITOR	0.01µF,25V
C96	QCYA1EK-103	CAPACITOR	0.01µF,25V
C97	QCTA1CH-330	CAPACITOR	33pF,16V
C98	QCTA1CH-6R0	CAPACITOR	6pF,16V
C99	QCTA1CH-100	CAPACITOR	10pF,16V
C100	QCTA1CH-150	CAPACITOR	15pF,16V
C101	QCTA1CH-151	CAPACITOR	150pF,16V
C102	QCTA1CH-471	CAPACITOR	470pF,16V
C103	QCYA1EK-103	CAPACITOR	0.01µF,25V
C104	QCYA1EK-223	CAPACITOR	0.022µF,25V
C105	QCYA1EK-103	CAPACITOR	0.01µF,25V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C106	QCYA1EK-103	CAPACITOR	0.01µF,25V
C107	QCTA1CH-240	CAPACITOR	24pF,16V
C108	QCYA1EK-103	CAPACITOR, BR-S800	0.01µF,25V
C109	QCYA1EK-103	CAPACITOR, BR-S800	0.01µF,25V
C110	QCYA1EK-103	CAPACITOR	0.01µF,25V
C111	QCTA1CH-270	CAPACITOR	27pF,16V
C112	QCTA1CH-330	CAPACITOR	33pF,16V
C113	QCTA1CH-680	CAPACITOR	68pF,16V
C115	QCTA1CH-330	CAPACITOR	33pF,16V
C116	QCYA1EK-473	CAPACITOR	0.047µF,25V
C117	QCYA1EK-103	CAPACITOR	0.01µF,25V
C118	QETC1AM-336	E CAPACITOR	33µF,10V
C119	QETC1CM-106	E CAPACITOR	10µF,16V
C120	QCYA1EK-103	CAPACITOR	0.01µF,25V
C121	QETC1AM-476	E CAPACITOR	47µF,10V
C122	QETC1AM-107	E CAPACITOR	100µF,10V
C123	QCTA1CH-271	CAPACITOR	270pF,16V
C124	QCTA1CH-330	CAPACITOR	33pF,16V
C125	QCYA1EK-103	CAPACITOR	0.01µF,25V
C127	QCYA1EK-103	CAPACITOR	0.01µF,25V
C128	QCTA1CH-470	CAPACITOR	47pF,16V
C129	QCTA1CH-390	CAPACITOR	39pF,16V
C130	QCYA1EK-103	CAPACITOR	0.01µF,25V
C131	QCTA1CH-471	CAPACITOR	470pF,16V
C133	QCTA1CH-820	CAPACITOR	82pF,16V
C134	QCTA1CH-120	CAPACITOR	12pF,16V
C135	QCYA1EK-103	CAPACITOR	0.01µF,25V
C136	QCYA1EK-103	CAPACITOR	0.01µF,25V
C137	QCYA1EK-103	CAPACITOR	0.01µF,25V
C138	QETC1CM-476	E CAPACITOR	47µF,16V
C139	QCYA1EK-103	CAPACITOR	0.01µF,25V
C140	QCTA1CH-271	CAPACITOR	270pF,16V
C142	QCTA1CH-151	CAPACITOR	150pF,16V
C144	QCYA1EK-103	CAPACITOR	0.01µF,25V
C145	QCTA1CH-330	CAPACITOR	33pF,16V
C146	QCYA1EK-103	CAPACITOR	0.01µF,25V
C147	QCYA1EK-103	CAPACITOR	0.01µF,25V
C148	QCTA1CH-390	CAPACITOR	39pF,16V
C149	QCTA1CH-470	CAPACITOR	47pF,16V
C150	QCTA1CH-470	CAPACITOR	47pF,16V
C151	QCTA1CH-220	CAPACITOR	22pF,16V
C152	QCTA1CH-180	CAPACITOR	18pF,16V
C153	QCTA1CH-390	CAPACITOR	39pF,16V
C154	QCTA1CH-150	CAPACITOR	15pF,16V
C155	QCTA1CH-120	CAPACITOR	12pF,16V
C156	QCTA1CH-820	CAPACITOR	82pF,16V
C157	QENC1HM-105	E CAPACITOR	1µF,50V
C158	QCYA1EK-104	CAPACITOR	0.1µF,25V
C159	QETC1HM-105	E CAPACITOR	1µF,50V
C160	QCYA1EK-104	CAPACITOR	0.1µF,25V
C161	QCYA1EK-104	CAPACITOR	0.1µF,25V
C162	QETC1CM-476	E CAPACITOR	47µF,16V
C163	QCYA1EK-103	CAPACITOR	0.01µF,25V
C164	QCYA1EK-103	CAPACITOR	0.01µF,25V
C165	QETC1CM-107	E CAPACITOR	100µF,16V
C166	QETC1CM-107	E CAPACITOR	100µF,16V
C168	QCTA1CH-181	CAPACITOR	180pF,16V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C169	QETC1CM-107	E CAPACITOR	100μF,16V
C170	QETC1CM-107	E CAPACITOR	100μF,16V
C171	QETC1CM-476	E CAPACITOR	47μF,16V
C172	QCYA1EK-103	CAPACITOR	0.01μF,25V
C173	QCYA1EK-103	CAPACITOR	0.01μF,25V
C174	QETC1CM-107	E CAPACITOR	100μF,16V
C175	QETC1CM-107	E CAPACITOR	100μF,16V
C178	QETC1CM-107	E CAPACITOR	100μF,16V
C179	QETC1CM-107	E CAPACITOR	100μF,16V
C180	QETC1CM-107	E CAPACITOR	100μF,16V
C181	QCTA1CH-330	CAPACITOR	33pF,16V
C182	QETC1CM-107	E CAPACITOR	100μF,16V
C183	QETC1HM-474	E CAPACITOR	0.47μF,50V
C184	QEE81VM-105	E CAPACITOR	1μF,35V
C185	QETC1CM-106	E CAPACITOR	10μF,16V
C186	QCTA1CH-150	CAPACITOR	15pF,16V
C187	QCYA1EK-103	CAPACITOR	0.01μF,25V
C188	QETC1CM-107	E CAPACITOR	100μF,16V
C189	QCYA1EK-103	CAPACITOR	0.01μF,25V
C190	QETC1CM-477	E CAPACITOR	470μF,16V
C191	QCYA1EK-103	CAPACITOR	0.01μF,25V
C192	QETC1CM-107	E CAPACITOR, BR-S800	100μF,16V
C193	QAT3661-500	TRIMMER CAPACITOR, S800	50pF
C194	QAT3661-500	TRIMMER CAPACITOR, S800	50pF
C195	QETC1CM-476	E CAPACITOR, BR-S800	47μF,16V
C196	QCYA1EK-103	CAPACITOR, BR-S800	0.01μF,25V
C197	QCYA1EK-103	CAPACITOR, BR-S800	0.01μF,25V
C208	QCYA1EK-103	CAPACITOR	0.01μF,25V
C209	QCYA1EK-103	CAPACITOR	0.01μF,25V
C210	QCYA1EK-103	CAPACITOR	0.01μF,25V
C211	QCYA1EK-103	CAPACITOR	0.01μF,25V
C212	QCYA1EK-103	CAPACITOR	0.01μF,25V
C213	QCYA1EK-103	CAPACITOR	0.01μF,25V
C214	QCYA1EK-103	CAPACITOR	0.01μF,25V
C217	QCTA1CH-120	CAPACITOR, BR-S800	12pF,16V
C218	QCTA1CH-180	CAPACITOR	18pF,16V
C219	QCTA1CH-560	CAPACITOR	56pF,16V
C221	QCYA1EK-103	CAPACITOR	0.01μF,25V
C222	QCYA1EK-104	CAPACITOR	0.1μF,25V
C225	QCTA1CH-390	CAPACITOR	39pF,16V
C228	QCYA1EK-103	CAPACITOR	0.01μF,25V
C229	QETC1CM-107	E CAPACITOR	100μF,16V
C230	QETC1CM-107	E CAPACITOR	100μF,16V
C231	QCYA1EK-103	CAPACITOR	0.01μF,25V
C232	QCYA1EK-103	CAPACITOR	0.01μF,25V
C233	QETC1CM-476	E CAPACITOR	47μF,16V
C236	QCYA1EK-104	CAPACITOR	0.1μF,25V
C237	QCTA1CH-820	CAPACITOR	82pF,16V
C241	QCYA1HK-102	CAPACITOR, BR-S800	0.001μF,50V
C241	QCYA1HK-103	CAPACITOR, BR-S500	0.01μF,50V
C244	QETC1CM-106	E CAPACITOR	10μF,16V
C246	QCYA1EK-103	CAPACITOR	0.01μF,25V
C248	QCTA1CH-220	CAPACITOR	22pF,16V
C249	QCTA1CH-121	CAPACITOR	120pF,16V
C250	QCYA1EK-223	CAPACITOR	0.022μF,25V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C252	QETC1CM-107	E CAPACITOR	100μF,16V
C253	QCYA1EK-103	CAPACITOR	0.01μF,25V
C254	QCYA1EK-103	CAPACITOR	0.01μF,25V
C255	QCTA1CH-120	CAPACITOR	12pF,16V
C256	QCYA1EK-223	CAPACITOR	0.022μF,25V
C257	QCTA1CH-471	CAPACITOR	470pF,16V
C258	QCYA1EK-223	CAPACITOR	0.022μF,25V
C259	QCYA1EK-223	CAPACITOR	0.022μF,25V
C260	QENC1HM-105	NP E CAPACITOR	1μF,50V
C261	QCYA1EK-103	CAPACITOR	0.01μF,25V
C262	QETC1CM-476	E CAPACITOR	47μF,16V
C263	QCYA1EK-103	CAPACITOR	0.01μF,25V
C264	QCTA1CH-220	CAPACITOR	22pF,16V
C265	QETC1CM-106	E CAPACITOR	10μF,16V
C266	QCTA1CH-101	CAPACITOR	100pF,16V
C267	QCTA1CH-121	CAPACITOR	120pF,16V
C268	QCTA1CH-390	CAPACITOR	39pF,16V
C269	QCTA1CH-471	CAPACITOR	470pF,16V
C270	QETC1CM-476	E CAPACITOR	47μF,16V
C272	QCTA1CH-471	CAPACITOR	470pF,16V
C273	QCTA1CH-471	CAPACITOR	470pF,16V
C274	QENC1HM-225	NP E CAPACITOR	2.2μF,50V
C275	QETC1CM-476	E CAPACITOR	47μF,16V
C276	QCYA1EK-103	CAPACITOR	0.01μF,25V
C277	QCF11HP-223	CAPACITOR	0.022μF,50V
C278	QCF11HP-223	CAPACITOR	0.022μF,50V
L2	PU48530-101J	COIL	100μH
L3	PU48530-101J	COIL	100μH
L4	PU48530-1R0J	RESISTOR	
L5	PU48530-221J	COIL, BR-S800	220μH
L6	PU48530-330J	COIL, BR-S800	33μH
L7	PU48530-470J	COIL, BR-S800	47μH
L8	PU48530-221J	COIL, BR-S800	220μH
L9	PU48530-821J	COIL	820μH
L10	PU48530-391J	COIL	390μH
L11	PU48530-222J	COIL	2.2mH
L12	PU48530-221J	COIL	220μH
L13	PU48530-4R7J	COIL, BR-S800	4.7μH
L15	PU48530-221J	COIL	220μH
L16	PU48530-101J	COIL	100μH
L17	PU48530-1R0J	COIL	1μH
L18	PU48530-390J	COIL	39μH
L19	PU48530-180J	COIL	18μH
L20	PU48530-220J	COIL	22μH
L21	PU48530-100J	COIL	10μH
L22	PU48530-330J	COIL	33μH
L23	PU48530-270J	COIL	27μH
L25	PU48530-221J	COIL	220μH
L26	YU41134-221JY	COIL	220μH
L27	YU41134-390J	COIL	39μH
L28	YU41134-470JY	COIL	47μH
L29	YU41134-270JY	COIL	27μH
L30	SCV1880-001	TEST POINT	
L31	YU41134-220J	COIL	22μH
L32	PU48530-221J	COIL	220μH

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	L33	YU41134-221JY	COIL	220μH
	L35	YU41134-390J	COIL	39μH
	L36	YU41134-5R6KY	COIL	5.6μH
	L37	YU41134-100JY	COIL	10μH
	L38	YU41134-390J	COIL	39μH
	L39	YU41134-221JY	COIL	220μH
	L40	YU41134-100JY	COIL	10μH
	L41	PU48530-221J	COIL	220μH
	L42	PU48530-1R0J	COIL	1μH
	L45	PU48530-150J	COIL	15μH
	L46	PU48530-221J	COIL	220μH
	L47	PU48530-221J	COIL	220μH
	L49	PU48530-101J	COIL	100μH
	L50	PU48530-470J	COIL	47μH
	L51	PU48530-221J	COIL	220μH
	L54	PU48530-390J	COIL	39μH
	L55	PU48530-221J	COIL	220μH
	L56	PU48530-271J	COIL	270μH
	L57	YU41134-101J	COIL	100μH
	LPF1	PU60055	LOW PASS FILTER	
	LPF2	PELN0336-01-01	LOW PASS FILTER	
	LPF3	PU61057	LOW PASS FILTER	
	LPF4	PELN0409	LOW PASS FILTER	
	LPF5	PGZ01782	LOW PASS FILTER	
	LPF6	PGZ01782	LOW PASS FILTER	
	BPF1	PELN0343	BAND PASS FILTER	
	DL1	TK16071M-XE	CHIP DELAY LINE	
	DL2	PELN0320	LOW PASS FILTER	
	DL3	PGZ00131-003	DELAY LINE	
⚠	K1	PGZ00627Z	FERRATE BEADS	
⚠	K2	PGZ00627Z	FERRATE BEADS	
⚠	K3	PGZ00627Z	FERRATE BEADS	
⚠	K4	SCV1880-001	FERRATE BEADS	
	SPC1	PGZ01128-02	SPACER, ×2	
	TP1	SQMX001-001Z	TEST PIN, ×20(S800), ×17(S500)	
	CN1	PGZ01937-44	MALE CONNECTOR	
	CN2	PGZ01937-44	MALE CONNECTOR	
	CN3	PU59555-114	CONNECTOR	

AV PRE/REC BOARD ASSEMBLY <12>

REF No.	PART No.	PART NAME, DESCRIPTION
PWBA	PRK20222A-01	AV PRE/REC BOARD ASSY, S800
PWBA	PRK20222B-01	AV PRE/REC BOARD ASSY, S500

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	IC1	BA7743FS	IC	
	IC2	M5278D05	IC	
	IC101	M5278D09	IC	
	IC102	M5278L05	IC	
	IC103	TC4013BF	IC	
	IC104	TC4053BF	IC	
	IC105	TC4S30F	IC	
	IC106	TC7W02F	IC	
	IC107	UPC2320GS	IC(DRY-BKG)	
	Q1	DTC323TK	TRANSISTOR, BR-S800	
	Q2	DTC323TK	TRANSISTOR, BR-S800	
	Q3	DTB123TS	TRANSISTOR, BR-S800	
	Q4	DTC124EK	DIODE, BR-S800	
	Q101	2SD601A(Q)	TRANSISTOR	
	Q102	2SC3110	TRANSISTOR	
	Q103	2SC3110	TRANSISTOR	
	Q104	2SC3110	TRANSISTOR	
	Q105	2SC3110	TRANSISTOR	
	Q106	2SA933S(Q)	TRANSISTOR, BR-S800	
	Q107	2SC1741S(QR)	TRANSISTOR, BR-S800	
	Q108	2SA933S(Q)	TRANSISTOR, BR-S800	
	Q109	2SD639R	TRANSISTOR, BR-S800	
	Q110	2SD639R	TRANSISTOR, BR-S800	
	Q111	2SD601A(Q)	TRANSISTOR	
	Q112	DTC124EK	TRANSISTOR, BR-S800	
	D1	1SS136	DIODE	
	D2	1SS136	DIODE	
	D101	UZ8.2BSC	ZENER DIODE, BR-S800	
	R1	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R2	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R3	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R4	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R5	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R6	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R7	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R8	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R9	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R10	QRSA08J-8R2YN	RESISTOR, BR-S800	8.2Ω,1/10W
	R11	QRSA08J-224YN	RESISTOR, BR-S800	220kΩ,1/10W
	R12	QRSA08J-103YN	RESISTOR, BR-S500	10kΩ,1/10W
	R14	QRSA08J-0R0Y	RESISTOR, BR-S500	0Ω,1/10W
	R15	QRSA08J-272YN	RESISTOR, BR-S800	2.7kΩ,1/10W
	R19	QRSA08J-101YN	RESISTOR, BR-S800	100Ω,1/10W
	R101	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R102	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R103	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R104	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R105	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R106	QRSA08J-221YN	RESISTOR, BR-S800	220Ω,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R107	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R108	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R109	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R110	QRSA08J-471YN	RESISTOR	470Ω,1/10W
	R111	QRSA08J-470YN	RESISTOR	47Ω,1/10W
	R112	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R113	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R114	QRSA08J-470YN	RESISTOR	47Ω,1/10W
	R115	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R116	QRSA08J-680YN	RESISTOR	68Ω,1/10W
	R117	QRSA08J-820YN	RESISTOR	82Ω,1/10W
	R118	PGZ01994-601Z	RESISTOR	600Ω
	R119	PGZ01994-601Z	RESISTOR	600Ω
	R120	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R121	PGZ01994-601Z	RESISTOR	600Ω
	R122	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R123	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R124	PGZ01994-601Z	RESISTOR	600Ω
	R125	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R126	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R127	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R128	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R129	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R130	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R131	QRSA08J-472YN	RESISTOR, BR-S800	4.7kΩ,1/10W
	R132	QRSA08J-473YN	RESISTOR, BR-S800	47kΩ,1/10W
	R133	QRSA08J-222YN	RESISTOR, BR-S800	2.2kΩ,1/10W
	R134	QRSA08J-473YN	RESISTOR, BR-S800	47kΩ,1/10W
	R135	QRSA08J-183YN	RESISTOR, BR-S800	18kΩ,1/10W
	R136	QRSA08J-121YN	RESISTOR, BR-S800	120Ω,1/10W
	R137	QRSA08J-104YN	RESISTOR, BR-S800	100kΩ,1/10W
	R138	QRSA08J-104YN	RESISTOR, BR-S800	100kΩ,1/10W
	R139	QRSA08J-121YN	RESISTOR, BR-S800	120Ω,1/10W
	R140	QRSA08J-221YN	RESISTOR, BR-S800	220Ω,1/10W
	R141	QRSA08J-391YN	RESISTOR	390kΩ,1/10W
	R142	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R143	QRSA08J-121YN	RESISTOR, BR-S800	120Ω,1/10W
	R144	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
	R145	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R146	QRSA08J-0R0Y	RESISTOR, BR-S500	0Ω,1/10W
	C1	QCYA1HK-102	CAPACITOR, BR-S800	0.001μF,50V
	C2	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C3	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C4	QEE81AM-107	TANTAL CAPACITOR	100μF,10V
	C5	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C6	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C7	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C8	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C9	QCTA1CH-561	CAPACITOR	560pF,16V
	C10	QCTA1CH-561	CAPACITOR	560pF,16V
	C11	QER61HM-105	E CAPACITOR	1μF,50V
	C12	QER61HM-105	E CAPACITOR	1μF,50V
	C13	QCTA1CH-101	CAPACITOR	100pF,16V
	C14	QFN31HJ-104	M CAPACITOR, BR-S800	0.1μF,50V
	C15	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C16	QER61CM-476	E CAPACITOR	47μF,16V
	C17	QCYA1HK-103	CAPACITOR, BR-S500	0.01μF,50V
⚠	C18	QCFA1CZ-224	CAPACITOR, BR-S800	0.22μF,16V
	C18	QRSA08J-0R0Y	RESISTOR, BR-S500	0Ω,1/10W
	C101	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C102	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C103	QEE81CM-106	TANTAL CAPACITOR	10μF,16V
	C104	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C105	QEE81CM-106	TANTAL CAPACITOR	10μF,16V
	C106	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C107	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C108	QEE81CM-106	TANTAL CAPACITOR	10μF,16V
	C109	QEE81CM-106	TANTAL CAPACITOR	10μF,16V
	C110	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C111	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C112	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C113	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C114	QCYA1EK-103	CAPACITOR	0.01μF,25V
	C115	QER61CM-106	E CAPACITOR	10μF,16V
	C116	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C117	QCYA1EK-104	CAPACITOR, BR-S800	0.1μF,25V
	C118	QCYA1EK-104	CAPACITOR, BR-S800	0.1μF,25V
	C119	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C120	QEE81VM-474	TANTAL CAPACITOR	0.47μF,35V
	C121	QCYA1HK-222	CAPACITOR	0.0022μF,50V
	C122	QCYA1HK-222	CAPACITOR	0.0022μF,50V
	C123	QCTA1CH-9R0	CAPACITOR	9pF,16V
	C124	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C125	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C126	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C127	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C128	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C130	QEE81VM-474	TANTAL CAPACITOR	0.47μF,35V
	C131	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C132	QEE81VM-474	TANTAL CAPACITOR	0.47μF,35V
	C133	QEE81VM-474	TANTAL CAPACITOR	0.47μF,35V
	C134	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C135	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C136	QEE81VM-474	TANTAL CAPACITOR	0.47μF,35V
	C137	QCYA1EK-103	CAPACITOR, BR-S800	0.01μF,25V
	C137	QCYA1HK-103	CAPACITOR, BR-S500	0.01μF,50V
	C138	QCTA1CH-101	CAPACITOR	100pF,16V
	C139	QCTA1CH-101	CAPACITOR	100pF,16V
	C140	QCTA1CH-101	CAPACITOR	100pF,16V
	C141	QCTA1CH-101	CAPACITOR	100pF,16V
	C142	QCTA1CH-100	CAPACITOR	10pF,16V
	C143	QCTA1CH-100	CAPACITOR	10pF,16V
	C146	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C147	QCFA1EZ-104	CAPACITOR, BR-S800	0.1μF,25V
	C148	QCF31HP-103	CAPACITOR, BR-S800	0.01μF,50V
	C149	QCBB1HJ-820	CAPACITOR, BR-S800	82pF,50V
	C150	QCBB1HJ-820	CAPACITOR, BR-S800	82pF,50V
	C151	QCSB1HJ-560	CAPACITOR, BR-S800	56pF,50V
	C152	QCC11EJ-123	CAPACITOR, BR-S800	0.012μF,25V
	C153	QCT25UJ-181	CAPACITOR, BR-S800	180pF
	C155	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C156	QCFA1EZ-104	CAPACITOR, BR-S800	0.1μF,25V
	C157	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C158	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C159	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C161	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C162	QETC1CM-476	E CAPACITOR	47μF,16V
	C171	QCTA1CH-101	CAPACITOR, BR-S800	100pF,16V
	L101	YU41134-1R0MY	COIL	1μH
	L102	YU41134-101J	COIL	100μH
	L103	YU41134-101J	COIL	100μH
	L104	PU48530-100J	COIL	10μH
	L105	YU41134-101J	COIL, BR-S800	100μH
	L106	PU48530-560J	COIL, BR-S800	56μH
	L107	PU48530-3R3J	COIL, BR-S800	3.3μH
⚠	K1	PU60281-2Z	FERRATE BEADS	
⚠	K2	PU60281-2Z	FERRATE BEADS	
⚠	K101	PU60281-2Z	FERRATE BEADS	
⚠	K102	PU60281-2Z	FERRATE BEADS	
⚠	K104	PU60281-2Z	FERRATE BEADS	
⚠	K105	PU60281-2Z	FERRATE BEADS	
⚠	K106	PU60281-2Z	FERRATE BEADS, BR-S800	
⚠	K107	PU60281-2Z	FERRATE BEADS	
⚠	K108	PU60281-2Z	FERRATE BEADS, BR-S800	
	T101	PU56175	S.TRANS, BR-S800	
	BKT1	PRD44235	BOARD BRACKET, ×2	
	SCW1	DPSP2608Z	SCREW, ×2	
	SCW2	WBS2600N	WASHER, ×2	
	SLD1	PQ33493	SHIELDE CASE, BR-S800	
	SLD2	PQ33494	SHIELDE COVER, BR-S800	
	SLD3	PRS40034	SHIELD CASE	
	TP1	SQMX001-001Z	TEST PIN, ×6	
	CN1	PU59555-103	CONNECTOR	
	CN2	PU59555-106	CONNECTOR, BR-S800	
	CN2	PU59555-104	CONNECTOR, BR-S500	
	CN3	PU56258-14	CONNECTOR	
	CN5	PU59555-106	CONNECTOR	
	CN6	PU59555-114	CONNECTOR	

FM AUDIO BOARD ASSEMBLY <20>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK10138A-01	FM AUDIO BOARD ASSY, BR-S800	
	PWBA	PRK10138B-01	FM AUDIO BOARD ASSY, BR-S500	
	IC1	M5278D05	IC	
	IC2	JCP0038	IC	
	IC3	TC4052BF	IC	
	IC4	TC4052BF	IC	
	IC5	M51132L	IC	
	IC6	M5218AFP-XE1	IC	
	IC7	TL082CPS	IC	
	IC8	AN6041	IC, BR-S800	
	IC9	M37451E8-501FP	IC	
	IC10	BR24C01AF	IC	
	IC11	M62353GP	IC	
	IC12	M62353GP	IC	
	IC13	TC4051BF	IC	
	IC14	M5218AFP-XE1	IC	
	IC15	M5218AFP-XE1	IC	
	IC19	M5218AFP-XE1	IC, BR-S800	
	Q1	2SD973AR	TRANSISTOR	
	Q2	2SK208	FE TRANSISTOR	
	Q3	2SK208	FE TRANSISTOR	
	Q4	2SC2412K	TRANSISTOR, BR-S800	
	Q5	2SA1037K	TRANSISTOR, BR-S800	
	Q6	2SC2412K	TRANSISTOR, BR-S800	
	Q7	DTC124EK	TRANSISTOR	
	Q8	DTC124EK	TRANSISTOR	
	Q9	DTC124EK	TRANSISTOR	
	Q10	DTC124EK	TRANSISTOR	
	Q11	DTC323TK	TRANSISTOR	
	Q12	DTC124EK	TRANSISTOR	
	Q13	DTC124EK	TRANSISTOR	
	Q14	2SC2412K(RS)	TRANSISTOR	
	Q15	DTA124EK	TRANSISTOR	
	Q17	DTC124EK	TRANSISTOR, BR-S800	
	Q18	DTA124EK	TRANSISTOR, BR-S800	
	Q19	DTA124EK	TRANSISTOR, BR-S800	
	D1	DA204K	DIODE	
	D2	DA204K	DIODE	
	D3	DA204K	DIODE	
	D4	RD5.1ES-T1B1	ZENER DIODE	
	DA1	DA204K	DIODE	
	R1	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R2	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R3	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R4	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R7	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R8	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
	R9	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R10	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R11	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R12	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R13	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R14	QRSA08J-303YN	RESISTOR	30kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R15	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R17	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
R18	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R19	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R20	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R21	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R22	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R23	QRSA08J-123YN	RESISTOR, BR-S800	12kΩ,1/10W
R24	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R25	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R26	QRSA08J-561YN	RESISTOR, BR-S800	560Ω,1/10W
R27	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R28	QRSA08J-123YN	RESISTOR, BR-S800	12kΩ,1/10W
R29	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
R30	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R31	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R32	QRSA08J-102YN	RESISTOR, BR-S800	1kΩ,1/10W
R37	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R38	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R39	QRSA08J-511YN	RESISTOR	510Ω,1/10W
R40	QRSA08J-511YN	RESISTOR	510Ω,1/10W
R41	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R42	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R43	QRSA08J-513YN	RESISTOR	51kΩ,1/10W
R44	QRSA08J-513YN	RESISTOR	51kΩ,1/10W
R45	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R46	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R47	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R48	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R49	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R50	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R51	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R52	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R53	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R54	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R55	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
R56	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R57	QVPC625-682Z	V RESISTOR	6.8kΩ
R58	QVPC625-682Z	V RESISTOR	6.8kΩ
R59	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R60	QRSA08J-683YN	RESISTOR	68kΩ,1/10W
R61	QRSA08J-684YN	RESISTOR	680kΩ,1/10W
R62	QRSA08J-684YN	RESISTOR	680kΩ,1/10W
R63	QRSA08J-684YN	RESISTOR	680kΩ,1/10W
R64	QRSA08J-684YN	RESISTOR	680kΩ,1/10W
R65	QRSA08J-912YN	RESISTOR, BR-S800	9.1kΩ,1/10W
R66	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
R67	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R68	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R71	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R72	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R73	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R74	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R75	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R76	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R77	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R78	QRSA08J-103YN	RESISTOR	10kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R79	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R80	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R81	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R82	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
R83	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R84	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R85	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R86	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R101	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R102	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R104	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R105	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R106	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R107	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R108	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R109	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R111	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R112	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R113	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R114	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R115	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R116	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R117	QRSA08J-103YN	RESISTOR, BR-S800	10kΩ,1/10W
R118	QRSA08J-103YN	RESISTOR, BR-S800	10kΩ,1/10W
R119	QRSA08J-124YN	RESISTOR, BR-S800	120kΩ,1/10W
R120	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R121	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R122	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R123	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R124	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R125	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R126	NRVA62D-563N	RESISTOR	56kΩ,1/16W
R127	NRVA62D-123N	RESISTOR	12kΩ,1/16W
R128	NRVA62D-102N	RESISTOR	1kΩ,1/16W
R129	NRVA62D-101N	RESISTOR	100Ω,1/16W
R131	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R132	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R133	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R134	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R135	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R136	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R137	NRVA62D-393N	RESISTOR	39kΩ,1/16W
R138	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R139	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R140	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R141	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R142	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R143	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R144	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R145	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R146	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R147	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R148	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R201	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R202	QRSA08J-683YN	RESISTOR, BR-S800	68kΩ,1/10W
R203	QRSA08J-273YN	RESISTOR, BR-S800	27kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R204	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R205	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R206	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R207	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R208	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R209	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R211	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R212	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R213	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
R214	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
C1	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C2	QCYA1HK-103	CAPACITOR	0.01μF,50V
C3	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C4	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C5	QCYA1HK-103	CAPACITOR	0.01μF,50V
C6	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C7	QCYA1HK-103	CAPACITOR	0.01μF,50V
C8	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C9	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C11	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C12	QETC0JM-107ZE	E CAPACITOR	100μF,6.3V
C13	QETC0JM-107ZE	E CAPACITOR	100μF,6.3V
C14	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C15	QCYA1HK-103	CAPACITOR	0.01μF,50V
C16	QCYA1HK-473	CAPACITOR	0.047μF,50V
C17	QCYA1HK-103	CAPACITOR	0.01μF,50V
C18	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C19	QCTA1CH-471	CAPACITOR	470pF,16V
C20	QCTA1CH-561	CAPACITOR	560pF,16V
C21	QCYA1EK-104	CAPACITOR	0.1μF,25V
C22	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C23	QCSA1HJ-101	CAPACITOR	100pF,50V
C24	QCSA1HJ-101	CAPACITOR	100pF,50V
C25	QETC1CM-476ZE	E CAPACITOR, BR-S800	47μF,16V
C26	QCTA1CH-101	CAPACITOR, BR-S800	100pF,16V
C27	QCYA1HK-223	CAPACITOR, BR-S800	0.022μF,50V
C28	QCTA1CH-121	CAPACITOR, BR-S800	120pF,16V
C29	QETC1CM-476	E CAPACITOR, BR-S800	47μF,16V
C30	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
C31	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
C32	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
C33	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
C35	QCYA1HK-103	CAPACITOR	0.01μF,50V
C36	QCYA1HK-103	CAPACITOR	0.01μF,50V
C37	QETC1CM-336ZE	E CAPACITOR	33μF,16V
C38	QETC1CM-336ZE	E CAPACITOR	33μF,16V
C39	QFN31HJ-473	M CAPACITOR	0.047μF,50V
C40	QFN31HJ-473	M CAPACITOR	0.047μF,50V
C41	QETC1HM-225ZE	E CAPACITOR	2.2μF,50V
C42	QETC1HM-225ZE	E CAPACITOR	2.2μF,50V
C43	QFN31HJ-333	M CAPACITOR	0.033μF,50V
C44	QFN31HJ-333	M CAPACITOR	0.033μF,50V
C45	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C46	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C47	QETC1CM-227ZE	E CAPACITOR	220μF,16V
C48	QETC1CM-227ZE	E CAPACITOR	220μF,16V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C49	QETC1HM-225ZE	E CAPACITOR	2.2μF,50V
C50	QETC1HM-225ZE	E CAPACITOR	2.2μF,50V
C51	QFN31HJ-103	M CAPACITOR	0.01μF,50V
C52	QFN31HJ-103	M CAPACITOR	0.01μF,50V
C53	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C54	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C55	QCYA1HK-103	CAPACITOR	0.01μF,50V
C56	QCYA1HK-103	CAPACITOR	0.01μF,50V
C57	QCYA1HK-102	CAPACITOR	0.001μF,50V
C58	QCYA1HK-102	CAPACITOR	0.001μF,50V
C59	QFN31HJ-822	M CAPACITOR	0.0082μF,50V
C60	QFN31HJ-822	M CAPACITOR	0.0082μF,50V
C61	QFN31HJ-104	M CAPACITOR	0.1μF,50V
C62	QFN31HJ-104	M CAPACITOR	0.1μF,50V
C63	QFN31HJ-223	M CAPACITOR	0.022μF,50V
C64	QFN31HJ-223	M CAPACITOR	0.022μF,50V
C65	QCTA1CH-821	CAPACITOR	820pF,16V
C66	QCTA1CH-821	CAPACITOR	820pF,16V
C67	QFN31HJ-392	M CAPACITOR	0.0039μF,50V
C68	QFN31HJ-392	M CAPACITOR	0.0039μF,50V
C69	QCYA1EK-104	CAPACITOR	0.1μF,25V
C70	QCYA1EK-104	CAPACITOR	0.1μF,25V
C71	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C72	QCYA1HK-333	CAPACITOR	0.033μF,50V
C73	QCYA1HK-103	CAPACITOR	0.01μF,50V
C74	QCYA1HK-103	CAPACITOR	0.01μF,50V
C75	QCYA1HK-103	CAPACITOR	0.01μF,50V
C76	QCYA1HK-103	CAPACITOR	0.01μF,50V
C77	QENC1CM-106	E CAPACITOR	10μF,16V
C78	QENC1CM-106	E CAPACITOR	10μF,16V
C79	QENC1CM-106	NP E CAPACITOR	10μF,16V
C80	QENC1CM-106	NP E CAPACITOR	10μF,16V
C81	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C82	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C83	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C84	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C85	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C86	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C87	QENC1CM-106	NP E CAPACITOR	10μF,16V
C88	QENC1CM-106	NP E CAPACITOR	10μF,16V
C89	QCYA1HK-222	CAPACITOR, S800	0.0022μF,50V
C90	QCYA1HK-222	CAPACITOR, S800	0.0022μF,50V
C91	QCYA1HK-222	CAPACITOR, S800	0.0022μF,50V
C92	QCYA1HK-222	CAPACITOR, S800	0.0022μF,50V
C93	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
C94	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
C95	QENC1CM-106	NP E CAPACITOR	10μF,16V
C96	QENC1CM-106	NP E CAPACITOR	10μF,16V
C97	QETC1CM-106	E CAPACITOR	10μF,16V
C98	QETC1CM-106	E CAPACITOR	10μF,16V
C101	QCYA1EK-104	CAPACITOR	0.1μF,25V
C102	QCTA1CH-470	CAPACITOR	47pF,16V
C103	QCTA1CH-270	CAPACITOR	27pF,16V
C104	QCYA1EK-104	CAPACITOR	0.1μF,25V
C105	QCYA1EK-104	CAPACITOR	0.1μF,25V
C106	QCYA1EK-104	CAPACITOR	0.1μF,25V
C107	QETC1CM-476ZE	E CAPACITOR	47μF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C108	QCYA1EK-104	CAPACITOR	0.1μF,25V
		C109	QETC1CM-226ZE	E CAPACITOR, BR-S800	22μF,16V
		C110	QCTA1CH-221	CAPACITOR, BR-S800	220pF,16V
		C111	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
		C114	QETC1CM-476ZE	E CAPACITOR	47μF,16V
		C115	QENC1CM-106	NP E CAPACITOR	10μF,16V
		C116	QETC1CM-476ZE	E CAPACITOR	47μF,16V
		C117	QENC1CM-106	NP E CAPACITOR	10μF,16V
		C119	QETC1CM-106	E CAPACITOR	10μF,16V
		C120	QETC1CM-476	E CAPACITOR	47μF,16V
		C121	QCTA1CH-100	CAPACITOR	10pF,16V
		C122	QETC1CM-106	E CAPACITOR	10μF,16V
		C123	QETC1CM-476	E CAPACITOR	47μF,16V
		C124	QETC1CM-476	E CAPACITOR	47μF,16V
		C125	QCFA1CZ-224	CAPACITOR	0.22μF,16V
		C126	QCFA1CZ-224	CAPACITOR	0.22μF,16V
		C127	QCFA1CZ-224	CAPACITOR	0.22μF,16V
		C129	QETC1CM-476	E CAPACITOR	47μF,16V
		C130	QETC1CM-476	E CAPACITOR	47μF,16V
		C131	QETC1CM-476	E CAPACITOR	47μF,16V
		C133	QETC1CM-476	E CAPACITOR	47μF,16V
		C134	QETC1CM-476	E CAPACITOR	47μF,16V
		C135	QCYA1HK-272	CAPACITOR	0.0027μF,50V
		C136	QETC1CM-106	E CAPACITOR	10μF,16V
		C137	QCYA1HK-102	CAPACITOR	0.001μF,50V
		C168	QETC1CM-476ZE	E CAPACITOR	47μF,16V
		C169	QETC1CM-476	E CAPACITOR	47μF,16V
		C201	QETC1CM-106	E CAPACITOR	10μF,16V
		C202	QETC1CM-106	E CAPACITOR	10μF,16V
		L1	PU30284-1R	COIL	1μH
		L2	PU30284-1R	COIL	1μH
		L3	PU48530-331J	COIL	330μH
		L5	PU48530-331J	COIL	330μH
		L6	PU48530-331J	COIL	330μH
		BPF1	PU60396	BAND PASS FILTER	
		BPF2	PU60397	BAND PASS FILTER	
	⚠	X1	PEVB0335	CRYSTAL RESONATOR	
		CL1	PGZ01978	MINI CLAMP, BR-S800	
		HD1	PU60521	BOARD HOLDER, ×2	
		HD2	PU60522	BOARD HOLDER	
		SPC1	PGZ01128-02	SPACER, ×2	
		TP1	SQMX001-001Z	TEST PIN, ×7(S800), ×6(S500)	
		CN1	PGZ01937-44	MALE CONNECTOR	
		CN2	PU59555-6	CONNECTOR, BR-S800	
		CN2	PU59555-4	CONNECTOR, BR-S500	
		CN3	PU59973-18	CONNECTOR, BR-S800	
		CN4	PU59973-30	CONNECTOR	
		CN5	PU59973-30	CONNECTOR	

NORMAL AUDIO BOARD ASSY, S800 <21>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		PWBA	PRK10139A-01	N.AUDIO BOARD ASSY
		IC1	BA7765AS	IC
		IC2	BA7765AS	IC
		IC3	CXA1101P	IC
		IC4	CXA1101P	IC
		IC5	M5218AP	IC
		IC6	M5218AP	IC
		IC7	M51132L	IC
		IC8	M51132L	IC
		IC9	M51132L	IC
		IC10	M51132L	IC
		IC11	TC4053BP	IC
		IC201	NJM4560D	IC
		IC202	M5218AP	IC
		IC301	TC4066BP	IC
		IC302	M5218AP	IC
		IC303	M5218AP	IC
		IC304	UPC393C	IC
		Q1	2SD973R	TRANSISTOR
		Q2	DTC124EK	TRANSISTOR
		Q3	DTC124EK	TRANSISTOR
		Q4	DTC124EK	TRANSISTOR
		Q5	DTC124EK	TRANSISTOR
		Q6	DTC124EK	TRANSISTOR
		Q7	DTC124EK	TRANSISTOR
		Q8	DTC124EK	TRANSISTOR
		Q9	DTA124EK	TRANSISTOR
		Q10	DTA124EK	TRANSISTOR
		Q11	DTC323TK	TRANSISTOR
		Q12	DTC323TK	TRANSISTOR
		Q13	DTC323TK	TRANSISTOR
		Q14	DTC323TK	TRANSISTOR
		Q15	DTC124EK	TRANSISTOR
		Q16	DTC124EK	TRANSISTOR
		Q17	DTA124EK	TRANSISTOR
		Q18	DTA124EK	TRANSISTOR
		Q19	DTC323TK	TRANSISTOR
		Q20	DTC323TK	TRANSISTOR
		Q201	2SD638R,S	TRANSISTOR
		Q202	2SD638R,S	TRANSISTOR
		Q203	2SA1037K	TRANSISTOR

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	Q204	2SA1037K	TRANSISTOR	
	Q205	2SC2412K	TRANSISTOR	
	Q206	2SC2412K	TRANSISTOR	
	Q207	2SC2412K	TRANSISTOR	
	Q208	2SC2412K	TRANSISTOR	
	Q213	2SA1037K	TRANSISTOR	
	Q214	2SA1037K	TRANSISTOR	
⚠	Q215	2SB643R,S	TRANSISTOR	
⚠	Q216	2SB643R,S	TRANSISTOR	
	Q217	2SC2412K	TRANSISTOR	
	Q218	2SC2412K	TRANSISTOR	
⚠	Q219	2SD638R,S	TRANSISTOR	
⚠	Q220	2SD638R,S	TRANSISTOR	
	Q221	DTC323TK	TRANSISTOR	
	Q222	DTC323TK	TRANSISTOR	
	Q223	DTC124EK	TRANSISTOR	
	Q224	DTC124EK	TRANSISTOR	
	Q225	2SC2412K	TRANSISTOR	
	Q226	2SC2412K	TRANSISTOR	
	Q227	2SC2412K	TRANSISTOR	
	Q228	2SC2412K	TRANSISTOR	
	Q229	DTA124EK	TRANSISTOR	
	Q230	DTA124EK	TRANSISTOR	
	Q231	DTC124EK	TRANSISTOR	
	Q232	DTC124EK	TRANSISTOR	
	Q302	DTA124EK	TRANSISTOR	
	Q303	DTC323TK	TRANSISTOR	
	Q305	DTC124EK	TRANSISTOR	
	Q306	DTC323TK	TRANSISTOR	
	Q307	2SC2412K	TRANSISTOR	
	D1	ERA15-02PNLB	DIODE	
	D201	RD5.6ES-T1B2	ZENER DIODE	
	D202	RD5.6ES-T1B2	ZENER DIODE	
	DA201	DA204K	DIODE	
	DA301	DA204K	DIODE	
	R1	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R2	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R3	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R4	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R5	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R6	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
	R7	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R9	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R10	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R11	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
	R12	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
	R13	QRSA08J-432YN	RESISTOR	4.3kΩ,1/10W
	R14	QRSA08J-432YN	RESISTOR	4.3kΩ,1/10W
	R15	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R16	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R17	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
	R18	QRSA08J-124YN	RESISTOR	120kΩ,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R19	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R20	QRSA08J-821YN	RESISTOR	820Ω,1/10W
	R21	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R22	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R23	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R24	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R25	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R26	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R27	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R28	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R29	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R30	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R31	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R32	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R33	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R34	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R35	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R36	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R37	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R38	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R39	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R40	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R41	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R42	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R43	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R44	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R45	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R46	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R47	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R48	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R49	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R50	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R51	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R52	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R53	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R54	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R55	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R56	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R57	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R58	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R59	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
	R60	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
	R61	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R62	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R63	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R64	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R65	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R66	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R67	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R68	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
	R71	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R72	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R73	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R74	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R75	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R76	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R77	QRSA08J-331YN	RESISTOR	330Ω,1/10W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R78	QRSA08J-331YN	RESISTOR	330Ω,1/10W
	R79	QRSA08J-433YN	RESISTOR	43kΩ,1/10W
	R80	QRSA08J-433YN	RESISTOR	43kΩ,1/10W
	R81	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R82	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R83	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
	R84	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
	R85	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R86	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R87	QRSA08J-564YN	RESISTOR	560kΩ,1/10W
	R88	QRSA08J-564YN	RESISTOR	560kΩ,1/10W
	R89	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R90	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R91	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R92	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R93	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R94	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R99	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R100	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R101	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R102	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R103	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R104	QRSA08J-562YN	RESISTOR	5.6kΩ,1/10W
	R105	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R106	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R107	QRSA08J-271YN	RESISTOR	270Ω,1/10W
	R108	QRSA08J-271YN	RESISTOR	270Ω,1/10W
	R109	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R110	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R111	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
	R112	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
	R115	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R116	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R117	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R118	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R119	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
	R121	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R122	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R123	QRD161J-821	RESISTOR	820Ω,1/6W
	R124	QRD161J-821	RESISTOR	820Ω,1/6W
	R201	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R202	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R203	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R204	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R205	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R206	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
	R207	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R208	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
	R209	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R210	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
⚠	R213	QRZ0054-180	FUSIBLE RESISTOR	18Ω
⚠	R214	QRZ0054-180	FUSIBLE RESISTOR	18Ω
	R215	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R216	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R217	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
	R218	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R219	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R220	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R221	QRSA08J-153YN	RESISTOR	12kΩ,1/10W
	R222	QRSA08J-153YN	RESISTOR	12kΩ,1/10W
	R223	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R224	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R225	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R226	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R227	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R228	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R229	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R230	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R231	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R232	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R233	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R234	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
⚠	R235	QRD161J-1R0	FUSIBLE RESISTOR	1Ω,1/6W
⚠	R236	QRD161J-1R0	FUSIBLE RESISTOR	1Ω,1/6W
⚠	R237	QRD161J-1R0	FUSIBLE RESISTOR	1Ω,1/6W
⚠	R238	QRD161J-1R0	FUSIBLE RESISTOR	1Ω,1/6W
⚠	R239	QRZ0054-120	FUSIBLE RESISTOR	12Ω
⚠	R240	QRZ0054-120	FUSIBLE RESISTOR	12Ω
	R245	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R246	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R247	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R248	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R249	QRSA08J-2R2YN	RESISTOR	2.2Ω,1/10W
	R250	QRSA08J-2R2YN	RESISTOR	2.2Ω,1/10W
	R251	QRSA08J-824YN	RESISTOR	820kΩ,1/10W
	R252	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R253	NRVA02D-8451AY	RESISTOR	8.45kΩ,1/10W
	R254	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R255	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R256	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R257	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R258	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
	R259	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R260	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
	R262	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R263	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R264	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R265	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R267	QRSA08J-2R2YN	RESISTOR	2.2Ω,1/10W
	R268	QRSA08J-2R2YN	RESISTOR	2.2Ω,1/10W
	R269	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R270	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R271	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R272	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R273	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R274	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R301	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R302	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R303	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
	R304	QRSA08J-184YN	RESISTOR	180kΩ,1/10W
	R305	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
	R306	QRSA08J-333YN	RESISTOR	33kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R307	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R308	QRSA08J-685YN	RESISTOR	6.8MΩ,1/10W
R309	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R310	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R311	QRSA08J-331YN	RESISTOR	330Ω,1/10W
R312	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R314	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R315	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R316	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R317	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R318	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R319	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R320	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R321	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R322	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R323	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R324	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R325	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R326	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R327	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R328	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R329	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R330	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R331	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R332	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
R333	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
R334	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R335	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R336	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R337	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R338	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R339	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R501	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R502	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R503	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R504	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R505	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R506	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R507	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R508	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R509	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R510	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R511	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R512	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R513	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R514	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R515	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R516	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R517	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R518	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R519	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R520	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R521	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R522	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R523	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R524	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R525	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R526	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R527	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R528	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R529	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
C1	QCYA1HK-103	CAPACITOR	0.01μF,50V
C2	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C3	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C4	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C5	QCYA1HK-103	CAPACITOR	0.01μF,50V
C6	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C7	QENC1CM-106	NP E CAPACITOR	10μF,16V
C9	QENC1CM-106	NP E CAPACITOR	10μF,16V
C10	QENC1CM-106	NP E CAPACITOR	10μF,16V
C11	QCTA1CH-821	CAPACITOR	820pF,16V
C12	QCTA1CH-821	CAPACITOR	820pF,16V
C13	QEBA1EM-475	E CAPACITOR	4.7μF,25V
C14	QEBA1EM-475	E CAPACITOR	4.7μF,25V
C15	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C16	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C17	QCTA1CH-101	CAPACITOR	100pF,16V
C18	QCTA1CH-101	CAPACITOR	100pF,16V
C19	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C20	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C21	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C22	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C23	QCTA1CH-561	CAPACITOR	560pF,16V
C24	QCTA1CH-561	CAPACITOR	560pF,16V
C25	QCTA1CH-561	CAPACITOR	560pF,16V
C26	QCTA1CH-561	CAPACITOR	560pF,16V
C27	QENC1CM-106	NP E CAPACITOR	10μF,16V
C28	QENC1CM-106	NP E CAPACITOR	10μF,16V
C29	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C30	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C31	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C32	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C33	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C34	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C35	QFN31HJ-682	M CAPACITOR	0.0068μF,50V
C36	QFN31HJ-682	M CAPACITOR	0.0068μF,50V
C37	QENC1CM-106	NP E CAPACITOR	10μF,16V
C38	QENC1CM-106	NP E CAPACITOR	10μF,16V
C39	QCTA1CH-101	CAPACITOR	100pF,16V
C40	QCTA1CH-101	CAPACITOR	100pF,16V
C41	QCTA1CH-101	CAPACITOR	100pF,16V
C42	QCTA1CH-101	CAPACITOR	100pF,16V
C43	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C44	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C45	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C46	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C47	QENC1CM-106	NP E CAPACITOR	10μF,16V
C48	QENC1CM-106	NP E CAPACITOR	10μF,16V
C49	QFN31HJ-183	M CAPACITOR	0.018μF,50V
C50	QFN31HJ-183	M CAPACITOR	0.018μF,50V
C51	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C52	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C53	QETC1CM-476ZE	E CAPACITOR	47μF,16V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C54	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C55	QETC1HM-475ZE	E CAPACITOR	4.7μF,50V
C56	QETC1HM-475ZE	E CAPACITOR	4.7μF,50V
C57	QETC1HM-474ZE	E CAPACITOR	0.47μF,50V
C58	QETC1HM-474ZE	E CAPACITOR	0.47μF,50V
C59	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C60	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C61	QETC1CM-336ZE	E CAPACITOR	33μF,16V
C62	QETC1CM-336ZE	E CAPACITOR	33μF,16V
C63	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C64	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C65	QFN31HJ-822	M CAPACITOR	0.0082μF,50V
C66	QFN31HJ-822	M CAPACITOR	0.0082μF,50V
C67	QFN31HJ-103	M CAPACITOR	0.01μF,50V
C68	QFN31HJ-103	M CAPACITOR	0.01μF,50V
C69	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C70	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C71	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C72	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C73	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C74	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C75	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C76	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C77	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C78	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C79	NEE21VM-684RY	TANTAL CAPACITOR	0.68μF,35V
C80	NEE21VM-684RY	TANTAL CAPACITOR	0.68μF,35V
C81	QENC1CM-106	NP E CAPACITOR	10μF,16V
C82	QENC1CM-106	NP E CAPACITOR	10μF,16V
C83	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C84	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C85	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C86	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C87	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C88	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C89	QENC1CM-106	NP E CAPACITOR	10μF,16V
C90	QENC1CM-106	NP E CAPACITOR	10μF,16V
C91	QCTA1CH-101	CAPACITOR	100pF,16V
C92	QCTA1CH-101	CAPACITOR	100pF,16V
C93	QRD161J-0R0	BUS WIRE	
C94	QRD161J-0R0	BUS WIRE	
C95	QETC1HM-224ZE	E CAPACITOR	0.22μF,50V
C96	QETC1HM-224ZE	E CAPACITOR	0.22μF,50V
C97	QFN31HJ-123	M CAPACITOR	0.012μF,50V
C98	QFN31HJ-123	M CAPACITOR	0.012μF,50V
C99	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C100	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C101	QENC1CM-106	NP E CAPACITOR	10μF,16V
C102	QENC1CM-106	NP E CAPACITOR	10μF,16V
C103	QCYA1HK-152	CAPACITOR	0.0015μF,50V
C104	QCYA1HK-152	CAPACITOR	0.0015μF,50V
C105	QCF81CZ-105	CAPACITOR	1μF,16V
C106	QCF81CZ-105	CAPACITOR	1μF,16V
C109	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C110	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C111	QCF81CZ-105	CAPACITOR	1μF,16V
C112	QCF81CZ-105	CAPACITOR	1μF,16V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C113	QCF81CZ-105	CAPACITOR	1μF,16V
C114	QCF81CZ-105	CAPACITOR	1μF,16V
C115	QENC1CM-106	NP E CAPACITOR	10μF,16V
C116	QENC1CM-106	NP E CAPACITOR	10μF,16V
C117	QENC1CM-106	NP E CAPACITOR	10μF,16V
C118	QENC1CM-106	NP E CAPACITOR	10μF,16V
C119	QCYA1HK-152	CAPACITOR	0.0015μF,50V
C120	QCYA1HK-152	CAPACITOR	0.0015μF,50V
C121	QCS11HJ-680	CAPACITOR	68pF,50V
C122	QCS11HJ-680	CAPACITOR	68pF,50V
C201	QCYA1HK-103	CAPACITOR	0.01μF,50V
C202	QCYA1HK-103	CAPACITOR	0.01μF,50V
C203	QETC1CM-476	E CAPACITOR	47μF,16V
C204	QETC1CM-476	E CAPACITOR	47μF,16V
C205	QETC1CM-476	E CAPACITOR	47μF,16V
C206	QETC1CM-476	E CAPACITOR	47μF,16V
C207	QFP32AJ-102	PP CAPACITOR	0.001μF,100V
C208	QFP32AJ-102	PP CAPACITOR	0.001μF,100V
C209	QCT25CH-181	CAPACITOR	180pF
C210	QCT25CH-181	CAPACITOR	180pF
C211	QCYA1HK-103	CAPACITOR	0.01μF,50V
C212	QCYA1HK-103	CAPACITOR	0.01μF,50V
C213	QCTA1CH-221	CAPACITOR	220pF,16V
C214	QCTA1CH-221	CAPACITOR	220pF,16V
C215	QCTA1CH-221	CAPACITOR	220pF,16V
C216	QCTA1CH-221	CAPACITOR	220pF,16V
C217	QFP32AJ-123	PP CAPACITOR	0.012μF,100V
C218	QFP32AJ-123	PP CAPACITOR	0.012μF,100V
C219	QETC1CM-476	E CAPACITOR	47μF,16V
C220	QETC1CM-476	E CAPACITOR	47μF,16V
C221	QCYA1EK-393	CAPACITOR	0.039μF,25V
C222	QCYA1EK-393	CAPACITOR	0.039μF,25V
C223	QCYA1EK-393	CAPACITOR	0.039μF,25V
C224	QCYA1EK-393	CAPACITOR	0.039μF,25V
C225	QETC1CM-106	E CAPACITOR	10μF,16V
C226	QETC1CM-106	E CAPACITOR	10μF,16V
C227	QCYA1HK-223	CAPACITOR	0.022μF,50V
C228	QCTA1CH-271	CAPACITOR	270pF,16V
C229	QCTA1CH-271	CAPACITOR	270pF,16V
C230	QCTA1CH-271	CAPACITOR	270pF,16V
C231	QCYA1HK-103	CAPACITOR	0.01μF,50V
C232	QETC1CM-476	E CAPACITOR	47μF,16V
C233	QCYA1HK-103	CAPACITOR	0.01μF,50V
C234	QCYA1HK-103	CAPACITOR	0.01μF,50V
C235	QETC1CM-476	E CAPACITOR	47μF,16V
C236	QCYA1HK-103	CAPACITOR	0.01μF,50V
C237	QETC1CM-476	E CAPACITOR	47μF,16V
C239	QETC1EM-475	E CAPACITOR	4.7μF,25V
C240	QETC1EM-475	E CAPACITOR	4.7μF,25V
C301	QFN31HJ-153	M CAPACITOR	0.015μF,50V
C302	QETC1CM-227	E CAPACITOR	220μF,16V
C303	QENC1CM-106	NP E CAPACITOR	10μF,16V
C304	QFN31HJ-333	M CAPACITOR	0.033μF,50V
C305	QCTA1CH-561	CAPACITOR	560pF,16V
C306	QCTA1CH-561	CAPACITOR	560pF,16V
C307	QFN31HJ-103	M CAPACITOR	0.01μF,50V
C308	QCTA1CH-221	CAPACITOR	220pF,16V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C309	QETC1EM-475	E CAPACITOR	4.7μF,25V
C310	QENC1CM-106	NP E CAPACITOR	10μF,16V
C311	QETC1HM-105	E CAPACITOR	1μF,50V
C312	QETC1CM-476	E CAPACITOR	47μF,16V
C313	QETC1EM-475	E CAPACITOR	4.7μF,25V
C314	QETC1EM-475	E CAPACITOR	4.7μF,25V
C315	QETC1CM-106	E CAPACITOR	10μF,16V
C316	QENC1EM-475	NP E CAPACITOR	4.7μF,25V
C317	QETC1CM-476	E CAPACITOR	47μF,16V
C318	QENC1EM-475	NP E CAPACITOR	4.7μF,25V
C319	QETC1CM-106	E CAPACITOR	10μF,16V
C320	QENC1EM-475	NP E CAPACITOR	4.7μF,25V
C321	QETC1CM-227	E CAPACITOR	220μF,16V
C322	QETC1CM-476	E CAPACITOR	47μF,16V
L1	PGZ00917-472	COIL	
L2	PGZ00917-472	COIL	
L3	PGZ00917-682	COIL	
L4	PGZ00917-682	COIL	
L5	PGZ00917-472	COIL	
L6	PGZ00917-472	COIL	
L201	PU48530-3R9K	COIL	3.9μH
L203	PU48530-330J	COIL	33μH
L204	PU48530-330J	COIL	33μH
L301	PGZ00917-472	COIL	
LPF1	PU60206	LOW PASS FILTER	
LPF2	PU60206	LOW PASS FILTER	
RY1	PU55260	RELAY	
TH1	ERT-D2FGL103S	THERMISTOR	
TH2	ERT-D2FGL103S	THERMISTOR	
TH3	ERT-D2FHL102S	THERMISTOR	
TH4	ERT-D2FHL102S	THERMISTOR	
TH201	ERT-D2FHL102S	THERMISTOR	
TH202	ERT-D2FHL102S	THERMISTOR	
T201	PGZ01859	TRANS	
T202	PGZ01859	TRANS	
TP	SQMX001-001Z	TEST PIN	
TP1	SQMX001-001Z	TEST PIN, ×3	
CN1	PU59555-3	CONNECTOR	
CN2	PU59555-3	CONNECTOR	
CN3	PU59973-18	CONNECTOR	
CN4	PU59973-30	CONNECTOR	
CN5	PU59973-30	CONNECTOR	
CN201	PU59555-4	CONNECTOR	

NORMAL AUDIO BOARD ASSY, S500 <22>

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA	PRK10140A-01	N.AUDIO BOARD ASSY	
IC1	M5220P	IC	
IC2	M5220P	IC	
IC3	M51132L	IC	
IC4	M51132L	IC	
IC5	CXA1101P	IC	
IC301	TC4066BP	IC	
IC302	M5220P	IC	
IC303	UPC393C	IC	
Q1	DTC124EK	TRANSISTOR	
Q2	DTC124EK	TRANSISTOR	
Q3	DTA124EK	TRANSISTOR	
Q4	DTC323TK	TRANSISTOR	
Q5	DTC323TK	TRANSISTOR	
Q6	DTC323TK	TRANSISTOR	
Q7	2SK208	FE TRANSISTOR	
Q8	2SK208	FE TRANSISTOR	
Q9	DTC124EK	TRANSISTOR	
Q10	DTC124EK	TRANSISTOR	
Q11	2SD973AR	TRANSISTOR	
Q12	2SD973AR	TRANSISTOR	
Q301	2SD973AR	TRANSISTOR	
Q302	2SC2412K	TRANSISTOR	
DA301	DA204K	DIODE	
R1	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R2	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R3	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R4	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R5	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R6	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R7	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R8	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R9	QRSA08J-155YN	RESISTOR	1.5MΩ,1/10W
R10	QRSA08J-155YN	RESISTOR	1.5MΩ,1/10W
R11	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
R12	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
R13	QRSA08J-432YN	RESISTOR	4.3kΩ,1/10W
R14	QRSA08J-432YN	RESISTOR	4.3kΩ,1/10W
R15	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R16	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R17	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R18	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R19	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R20	QRSA08J-273YN	RESISTOR	27kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R21	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R22	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R23	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R24	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R25	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R26	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R29	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R30	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R31	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R32	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R33	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R34	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R35	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R36	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R37	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R38	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R39	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R40	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R41	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
R42	QRSA08J-202YN	RESISTOR	2kΩ,1/10W
R43	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R44	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R45	QRSA08J-433YN	RESISTOR	43kΩ,1/10W
R46	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R47	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R48	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R51	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R55	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R56	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R57	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R58	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R59	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R60	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R61	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R301	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R302	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R303	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R304	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R305	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R306	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R307	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R308	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R309	QRSA08J-685YN	RESISTOR	6.8MΩ,1/10W
R310	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R311	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R312	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R313	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R314	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R315	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R316	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R317	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R318	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R319	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R320	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R321	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R322	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R323	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
R324	QRSA08J-225YN	RESISTOR	2.2MΩ,1/10W
R325	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R326	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R327	QRSA08J-561YN	RESISTOR	560Ω,1/10W
R328	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R329	QRSA08J-750YN	RESISTOR	75Ω,1/10W
R330	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
C1	QCTA1CH-821	CAPACITOR	820pF,16V
C2	QCTA1CH-821	CAPACITOR	820pF,16V
C3	QCYA1HK-152	CAPACITOR	0.0015μF,50V
C4	QCYA1HK-152	CAPACITOR	0.0015μF,50V
C5	QEBC1HM-105	E CAPACITOR	1μF,50V
C6	QEBC1HM-105	E CAPACITOR	1μF,50V
C7	QCTA1CH-101	CAPACITOR	100pF,16V
C8	QCTA1CH-101	CAPACITOR	100pF,16V
C9	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C10	QFN31HJ-273	M CAPACITOR	0.027μF,50V
C11	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C12	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C13	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C14	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C15	QENC1CM-106	NP E CAPACITOR	10μF,16V
C16	QENC1CM-106	NP E CAPACITOR	10μF,16V
C17	QCYA1HK-103	CAPACITOR	0.01μF,50V
C18	QCYA1HK-103	CAPACITOR	0.01μF,50V
C19	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C20	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C21	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C22	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C23	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C24	QETC1CM-226ZE	E CAPACITOR	22μF,16V
C25	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C26	QETC1EM-475ZE	E CAPACITOR	4.7μF,25V
C27	QFN31HJ-682	M CAPACITOR	0.0068μF,50V
C28	QFN31HJ-682	M CAPACITOR	0.0068μF,50V
C29	QENC1EM-475	NP E CAPACITOR	4.7μF,25V
C30	QENC1EM-475	NP E CAPACITOR	4.7μF,25V
C31	QENC1EM-475ZE	E CAPACITOR	4.7μF,25V
C32	QENC1EM-475ZE	E CAPACITOR	4.7μF,25V
C33	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C34	QETC1CM-106ZE	E CAPACITOR	10μF,16V
C35	QFN31HJ-822	M CAPACITOR	0.0082μF,50V
C36	QFN31HJ-822	M CAPACITOR	0.0082μF,50V
C37	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C38	QETC1HM-105ZE	E CAPACITOR	1μF,50V
C39	NEE21VM-684RY	TANTAL CAPACITOR	0.68μF,35V
C40	NEE21VM-684RY	TANTAL CAPACITOR	0.68μF,35V
C41	QCYA1HK-103	CAPACITOR	0.01μF,50V
C42	QCYA1HK-103	CAPACITOR	0.01μF,50V
C43	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C44	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C45	QCYA1HK-103	CAPACITOR	0.01μF,50V
C46	QETC1CM-476ZE	E CAPACITOR	47μF,16V
C47	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C48	QETC1CM-107ZE	E CAPACITOR	100μF,16V
C49	QCYA1HK-103	CAPACITOR	0.01μF,50V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C50	QETC1CM-476ZE	E CAPACITOR	47 μ F,16V
C53	QENC1CM-106ZE	E CAPACITOR	10 μ F,16V
C54	QENC1CM-106ZE	E CAPACITOR	10 μ F,16V
C55	QETC1CM-106	E CAPACITOR	10 μ F,16V
C56	QETC1CM-106	E CAPACITOR	10 μ F,16V
C57	QETC1CM-106	E CAPACITOR	10 μ F,16V
C58	QETC1CM-106	E CAPACITOR	10 μ F,16V
C59	QETC1CM-476	E CAPACITOR	47 μ F,16V
C61	QETC1CM-107	E CAPACITOR	100 μ F,16V
C62	QETC1CM-107	E CAPACITOR	100 μ F,16V
C63	QCS11HJ-680	CAPACITOR	68pF,50V
C64	QCS11HJ-680	CAPACITOR	68pF,50V
C301	QFN31HJ-153	M CAPACITOR	0.015 μ F,50V
C302	QETC1CM-227ZE	E CAPACITOR	220 μ F,16V
C303	QEBC1EM-475	E CAPACITOR	4.7 μ F,25V
C304	QENC1CM-106	NP E CAPACITOR	10 μ F,16V
C305	QETC1HM-105	E CAPACITOR	1 μ F,50V
C306	QENC1EM-475	NP E CAPACITOR	4.7 μ F,25V
C307	QETC1CM-106	E CAPACITOR	10 μ F,16V
C308	QENC1EM-475	NP E CAPACITOR	4.7 μ F,25V
C309	QETC1CM-227	E CAPACITOR	220 μ F,16V
C310	QETC1CM-107	E CAPACITOR	100 μ F,16V
C311	QCYA1HK-103	CAPACITOR	0.01 μ F,50V
C312	QETC1CM-107	E CAPACITOR	100 μ F,16V
C313	QETC1CM-476	E CAPACITOR	47 μ F,16V
C314	QCYA1HK-103	CAPACITOR	0.01 μ F,50V
C315	QETC1CM-107ZE	E CAPACITOR	100 μ F,16V
C316	QCYA1HK-103	CAPACITOR	0.01 μ F,50V
C317	QETC1CM-476ZE	E CAPACITOR	47 μ F,16V
L1	PU48530-271J	COIL	270 μ H
L2	PU48530-271J	COIL	270 μ H
L301	PU48530-271J	COIL	270 μ H
LPF1	PU60206	LOW PASS FILTER	
LPF2	PU60206	LOW PASS FILTER	
TP1	SQMX001-001Z	TEST PIN, ×5	
CN1	PU59555-3	CONNECTOR	
CN2	PU59555-3	CONNECTOR	
CN4	PU59973-30	CONNECTOR	
CN5	PU59973-30	CONNECTOR	

AV I/O BOARD ASSEMBLY <23>

PWBA	PRK10150A-02	AV I/O BOARD ASSY, BR-S800	
PWBA	PRK10150B-02	AV I/O BOARD ASSY, BR-S500	

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
IC1	TC4053BP	IC	
IC2	M5218AP	IC	
IC3	M5201L	IC	
IC4	M5201L	IC	
IC5	TC4052BP	IC	
IC6	M5218AP	IC	
IC7	M50253P	IC	
IC8	M5218AP	IC	
IC51	M5201L	IC, BR-S800	
IC52	M5201L	IC, BR-S800	
IC53	M5201L	IC, BR-S800	
IC54	M5201L	IC, BR-S800	
IC55	M5201L	IC, BR-S800	
IC56	M5218AP	IC	
IC201	M52684AP	IC	
IC202	M35010-089SP	IC	
Q5	DTC323TK	TRANSISTOR	
Q6	DTC323TK	TRANSISTOR	
Q7	DTC323TK	TRANSISTOR	
Q8	DTC323TK	TRANSISTOR	
Q9	DTC323TK	TRANSISTOR	
Q10	2SD973AR	TRANSISTOR	
Q11	2SA1037K	TRANSISTOR	
Q12	DTA124EK	TRANSISTOR	
Q13	DTC323TK	TRANSISTOR	
Q14	DTC323TK	TRANSISTOR	
Q15	DTA124EK	TRANSISTOR	
Q51	DTC323TK	TRANSISTOR	
Q52	DTC323TK	TRANSISTOR	
Q53	2SC2412K	TRANSISTOR	
Q54	2SC2412K	TRANSISTOR	
Q201	2SC2778(C)	TRANSISTOR	
Q202	2SC2778(C)	TRANSISTOR	
Q203	2SA1022(C)	TRANSISTOR	
Q204	2SA1022(C)	TRANSISTOR	
Q205	2SC2778(C)	TRANSISTOR	
Q206	2SC2778(C)	TRANSISTOR	
Q207	2SC2778(C)	TRANSISTOR	
Q208	2SD601A(Q)	TRANSISTOR	
Q209	2SD601A(Q)	TRANSISTOR	
Q210	DTC144EK	TRANSISTOR	
D1	DAN202K	DIODE	
D2	DAN202K	DIODE	
D51	DAN202K	DIODE	
D52	DAN202K	DIODE	
D201	DAN202K	DIODE	
D202	DAN202K	DIODE	
R1	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R2	QRSA08J-823YN	RESISTOR	82kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R3	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R4	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R5	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R6	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R7	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R8	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R9	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R10	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R11	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R12	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R13	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R14	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R15	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R16	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R17	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R18	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R19	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R20	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R21	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R22	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R23	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R24	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R25	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R26	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R29	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R30	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R31	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R32	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R33	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R34	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R35	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R36	QRSA08J-124YN	RESISTOR	120kΩ,1/10W
R37	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R38	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R39	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R40	QRSA08J-122YN	RESISTOR	1.2kΩ,1/10W
R41	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R51	QRSA08J-822YN	RESISTOR, BR-S800	8.2kΩ,1/10W
R52	QRSA08J-822YN	RESISTOR, BR-S800	8.2kΩ,1/10W
R53	QRSA08J-822YN	RESISTOR, BR-S800	8.2kΩ,1/10W
R54	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R55	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R56	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R57	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R58	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R59	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R60	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R61	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R62	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R63	QRSA08J-822YN	RESISTOR, BR-S800	8.2kΩ,1/10W
R64	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R65	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R66	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R67	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R68	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R69	QRSA08J-822YN	RESISTOR, BR-S800	8.2kΩ,1/10W
R70	QRSA08J-822YN	RESISTOR, BR-S800	8.2kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R71	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R72	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R73	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R74	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R75	QRSA08J-122YN	RESISTOR, BR-S800	1.2kΩ,1/10W
R76	QRSA08J-122YN	RESISTOR, BR-S800	1.2kΩ,1/10W
R77	QRSA08J-122YN	RESISTOR, BR-S800	1.2kΩ,1/10W
R78	QRSA08J-122YN	RESISTOR, BR-S800	1.2kΩ,1/10W
R82	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R83	QRSA08J-333YN	RESISTOR, BR-S800	33kΩ,1/10W
R84	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
R85	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
R86	QRSA08J-223YN	RESISTOR, BR-S800	22kΩ,1/10W
R87	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R88	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R89	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R90	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R91	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R92	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R93	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R94	QRSA08J-393YN	RESISTOR	39kΩ,1/10W
R95	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R96	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R97	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R98	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R99	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R100	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R101	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R102	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R103	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R104	QRSA08J-821YN	RESISTOR	820Ω,1/10W
R105	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R106	QRSA08J-181YN	RESISTOR	180Ω,1/10W
R107	QVPC625-102Z	V RESISTOR	1kΩ
R108	QVPC625-102Z	V RESISTOR	1kΩ
R109	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R110	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R151	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R152	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R153	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R154	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R155	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R156	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R157	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R158	QRSA08J-823YN	RESISTOR	82kΩ,1/10W
R201	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R202	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R203	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R204	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R205	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R207	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R208	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
R209	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R210	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R211	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R212	QRSA08J-561YN	RESISTOR	560Ω,1/10W

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#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	R213	QRSA08J-182YN	RESISTOR	1.8kΩ,1／10W
	R214	QRSA08J-154YN	RESISTOR	150kΩ,1／10W
	R215	QRSA08J-333YN	RESISTOR	33kΩ,1／10W
	R216	QRSA08J-333YN	RESISTOR	33kΩ,1／10W
	R217	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
△	R218	QRG129J-820	OMF RESISTOR	82Ω,1／2W
	R219	QRSA08J-330YN	RESISTOR	33Ω,1／10W
	R220	QRSA08J-123YN	RESISTOR	12kΩ,1／10W
	R221	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
	R222	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R223	QRSA08J-750YN	RESISTOR	75Ω,1／10W
	R224	QRSA08J-271YN	RESISTOR	270Ω,1／10W
	R225	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R226	QRSA08J-393YN	RESISTOR	39kΩ,1／10W
	R227	QRSA08J-152YN	RESISTOR	1.5kΩ,1／10W
	R228	QRSA08J-101YN	RESISTOR	100Ω,1／10W
	R229	QRSA08J-681YN	RESISTOR	680Ω,1／10W
	R230	QRSA08J-183YN	RESISTOR	18kΩ,1／10W
	R231	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R232	QRSA08J-154YN	RESISTOR	150kΩ,1／10W
	R233	QRSA08J-0R0Y	RESISTOR	0Ω,1／10W
	R234	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R235	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
	R236	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R237	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R238	QRSA08J-221YN	RESISTOR	220Ω,1／10W
	R239	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R240	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R241	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R242	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R243	QRSA08J-471YN	RESISTOR	470Ω,1／10W
	C1	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C2	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C3	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C4	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C5	QER61CM-476	E CAPACITOR	47μF,16V
	C6	QER61CM-476	E CAPACITOR	47μF,16V
	C7	QER61CM-226	E CAPACITOR	22μF,16V
	C8	QER61CM-226	E CAPACITOR	22μF,16V
	C9	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C10	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C11	QER61CM-226	E CAPACITOR	22μF,16V
	C12	QER61CM-226	E CAPACITOR	22μF,16V
	C13	QER61CM-476	E CAPACITOR	47μF,16V
	C14	QER61CM-476	E CAPACITOR	47μF,16V
	C15	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C16	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C18	QER61CM-226	E CAPACITOR	22μF,16V
	C19	QER61CM-476	E CAPACITOR	47μF,16V
	C20	QER61CM-226	E CAPACITOR	22μF,16V
	C21	QER61CM-226	E CAPACITOR	22μF,16V
	C22	QER61CM-476	E CAPACITOR	47μF,16V
	C23	QETC1CM-107	E CAPACITOR	100μF,16V
	C24	QETC1CM-107	E CAPACITOR	100μF,16V
	C25	QER61CM-476	E CAPACITOR	47μF,16V
	C26	QETC1CM-107	E CAPACITOR	100μF,16V

#△	REF No.	PART No.	PART NAME, DESCRIPTION	
	C27	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C28	QETC1CM-107	E CAPACITOR	100μF,16V
	C29	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C30	QER61CM-476	E CAPACITOR	47μF,16V
	C31	QCYA1HK-333	CAPACITOR	0.033μF,50V
	C32	QCYA1HK-333	CAPACITOR	0.033μF,50V
	C51	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C52	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C53	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C54	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C55	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C56	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C57	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C58	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C59	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C60	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C61	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C62	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C64	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C65	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C66	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C67	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C68	QEPC1CM-106	NP E CAPACITOR	10μF,16V
	C69	QER61CM-106	E CAPACITOR	10μF,16V
	C70	QER61CM-106	E CAPACITOR	10μF,16V
	C71	QER61CM-226	E CAPACITOR	22μF,16V
	C72	QER61CM-226	E CAPACITOR	22μF,16V
	C73	QER61CM-475	E CAPACITOR	4.7μF,16V
	C74	QER61CM-475	E CAPACITOR	4.7μF,16V
	C75	QER61CM-476	E CAPACITOR	47μF,16V
	C201	QER61CM-476	E CAPACITOR	47μF,16V
	C202	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C203	QEK61CM-107	E CAPACITOR	100μF,16V
	C205	QENC1CM-106	E CAPACITOR	10μF,16V
	C206	QCTA1CH-331	CAPACITOR	330pF,16V
	C207	QETC1HM-335ZE	E CAPACITOR	3.3μF,50V
	C208	QEK61CM-107	E CAPACITOR	100μF,16V
	C209	QCTA1CH-181	CAPACITOR	180pF,16V
	C210	QER61CM-476	E CAPACITOR	47μF,16V
	C211	PU54990-3	E CAPACITOR	
	C212	QER41AM-227	E CAPACITOR	220μF,10V
	C213	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C214	QCTA1CH-220	CAPACITOR	22pF,16V
	C215	QCYA1HK-152	CAPACITOR	0.0015μF,50V
	C216	QCYA1HK-222	CAPACITOR	0.0022μF,50V
	C217	QER61HM-105	E CAPACITOR	1μF,50V
	C218	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C219	PU59499	BUS WIRE	
	C220	PU57672-500	TRIMMER CAPACITOR	50pF
	C221	QCTA1CH-150	CAPACITOR	15pF,16V
	C222	QCTA1CH-560	CAPACITOR	56pF,16V
	C223	QER61CM-476	E CAPACITOR	47μF,16V
	C224	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C225	QCTA1CH-100	CAPACITOR	10pF,16V
	C226	PU57672-200	TRIMMER CAPACITOR	20pF
	C227	QER61CM-476	E CAPACITOR	47μF,16V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C228	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C229	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C230	QCTA1CH-101	CAPACITOR	100pF,16V
	C232	QCTA1CH-101	CAPACITOR	100pF,16V
	L201	YU41135-221K	COIL	220μH
	L202	YU41135-221K	COIL	220μH
	L203	YU41135-221K	COIL	220μH
	L204	PU48530-220K	COIL	22μH
⚠	CF1	PU60086	CERAMIC FILTER	
⚠	X1	PGZ00898	CRYSTAL RESONATOR	
⚠	K201	PU60281-2Z	FERRATE BEADS	
⚠	K202	PU60281-2Z	FERRATE BEADS	
⚠	K203	QRD161J-0R0	FERRATE BEADS	
⚠	K204	QRD161J-0R0	FERRATE BEADS	
	K205	PU60281-2Z	FERRATE BEADS	
	SLD1	PU36469	SHIELD CASE	
	SLD2	PU60657	SHIELD COVER	
	SPC1	PGZ01128-02	SPACER, × 2	
	TP1	SQMX001-001Z	TEST PIN, × 15	
	CN1	PGZ01937-44	MALE CONNECTOR	
	CN2	PGZ01937-44	MALE CONNECTOR	

SERVO／M-CTL BOARD ASSEMBLY <30>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK10135A-01	M-CTL／SERVO BOARD ASSY
	STK1	PRD30072-83	STICKER
	STK2	PRD30072-84	STICKER
	STK3	PRD30072-85	STICKER
	IC1	UPD4053BG	IC
	IC2	UPD74HC04G	IC
	IC3	BA10393F	IC
	IC4	TC4W53F	IC
	IC5	UPD4030BG	IC
	IC6	UPD4066BG	IC
	IC7	UPD4066BG	IC
	IC8	NJM2068MD	IC
	IC9	BA10393F	IC
	IC10	NJM2068MD	IC
	IC11	BA10393F	IC
	IC12	BA10358F	IC
	IC13	UPD4013BG	IC
	IC14	SC78148GF-037	IC
	IC15	BR24C02F	IC
	IC16	UPD74HC573GS	IC
		or TC74HC573AF	IC
	IC17	UPD74HC138G	IC
	IC18	PGD30620-10-1	IC
		or PGD30620C-10-1	IC
	IC21	UPD71055GB	IC
	IC22	NJM2068MD	IC
	IC23	NJM2068MD	IC
	IC24	BA10358F	IC
	IC25	BA10339F	IC
	IC26	BA10358F	IC
	IC28	BA10358F	IC
	IC31	M62354FP	IC
	IC32	NJM2068MD	IC
	IC33	TA8405S	IC
	IC34	BA10358F	IC
	IC35	BA10393F	IC
	IC36	TL431CLP	IC
	IC37	AN3834K	IC
	IC38	AN3834K	IC
	IC39	TC4S69F	IC
	Q1	2SC2412K(RS)	TRANSISTOR
	Q2	2SA1037K(QR)	TRANSISTOR
	Q3	2SC2412K(RS)	TRANSISTOR
	Q4	2SK621	FE TRANSISTOR
	Q5	2SK621	FE TRANSISTOR
	Q6	2SC2412K(QR)	TRANSISTOR
	Q7	DTC114EK	TRANSISTOR
	Q8	2SA1037K(QR)	TRANSISTOR
	Q9	2SC2412K(RS)	TRANSISTOR
	Q10	2SD1691(K)	TRANSISTOR
	Q11	2SK621	FE TRANSISTOR
	Q12	DTA114EK	TRANSISTOR
	Q22	DTC114YK	TRANSISTOR
	Q23	DTC114WK	TRANSISTOR
	Q24	2SD1468S(RS)	TRANSISTOR
	Q25	2SB1151(L)	TRANSISTOR
	Q26	2SB1073(PQ)-XE	TRANSISTOR
	Q27	2SB1073(PQ)-XE	TRANSISTOR
	Q30	2SB907	TRANSISTOR
	Q31	2SB1073(PQ)-XE	TRANSISTOR
	Q32	2SB1073(PQ)-XE	TRANSISTOR
	Q33	DTC114WK	TRANSISTOR
	Q34	DTC114WK	TRANSISTOR
	Q37	DTC114WK	TRANSISTOR
	Q38	DTC114WK	TRANSISTOR
	Q39	DTC114WK	TRANSISTOR
	Q40	2SB1142(RST)	TRANSISTOR
	Q41	2SD1468S(RS)	TRANSISTOR

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#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
Q42	DTA124EK	TRANSISTOR	
Q43	2SB1142(RST)	TRANSISTOR	
Q44	2SD1468S(RS)	TRANSISTOR	
Q45	DTA124EK	TRANSISTOR	
D1	DAN202K	DIODE	
D2	RB400D	DIODE	
D3	HZ5CLL	ZENER DIODE	
D4	HZ5CLL	ZENER DIODE	
D21	ERA15-02PNLB	DIODE	
D22	ERA15-02PNLB	DIODE	
D25	ERA15-02PNLB	DIODE	
D26	ERA15-02PNLB	DIODE	
D27	ERA15-02PNLB	DIODE	
D28	RK14LF-B2	DIODE	
D29	DAN202K	DIODE	
D30	RK14LF-B2	DIODE	
D31	DAN202K	DIODE	
D32	MA3056(M)	DIODE	
D33	DAN202K	DIODE	
R3	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
R4	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R5	QRSA08J-183YN	RESISTOR	18kΩ,1／10W
R6	QRSA08J-183YN	RESISTOR	18kΩ,1／10W
R7	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R8	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R9	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R10	QRSA08J-101YN	RESISTOR	100Ω,1／10W
R11	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R12	QRSA08J-561YN	RESISTOR	560Ω,1／10W
R13	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R14	NRVA62D-183N	RESISTOR	18kΩ,1／16W
R15	NRVA62D-334N	RESISTOR	330kΩ,1／16W
R16	NRVA62D-334N	RESISTOR	330kΩ,1／16W
R17	NRVA62D-334N	RESISTOR	330kΩ,1／16W
R18	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R19	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R20	QRSA08J-224YN	RESISTOR	220kΩ,1／10W
R21	QRSA08J-474YN	RESISTOR	470kΩ,1／10W
R22	QRSA08J-474YN	RESISTOR	470kΩ,1／10W
R23	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R24	QRSA08J-224YN	RESISTOR	220kΩ,1／10W
R25	NRVA62D-183N	RESISTOR	18kΩ,1／16W
R26	NRVA62D-334N	RESISTOR	330kΩ,1／16W
R27	NRVA62D-334N	RESISTOR	330kΩ,1／16W
R28	NRVA62D-334N	RESISTOR	330kΩ,1／16W
R29	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R30	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R31	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R32	QRSA08J-332YN	RESISTOR	3.3kΩ,1／10W
R33	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R34	QRSA08J-561YN	RESISTOR	560Ω,1／10W
R35	QRSA08J-564YN	RESISTOR	560kΩ,1／10W
R36	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R37	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R38	QRSA08J-105YN	RESISTOR	1MΩ,1／10W
R39	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R40	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R41	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R42	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R43	QRSA08J-100YN	RESISTOR	10Ω,1／10W
R44	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R45	QRSA08J-333YN	RESISTOR	33kΩ,1／10W
R46	QRSA08J-183YN	RESISTOR	18kΩ,1／10W
R47	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
R48	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R49	QRSA08J-394YN	RESISTOR	390kΩ,1／10W
R50	NRVA62D-473N	RESISTOR	47kΩ,1／16W
R51	NRVA62D-473N	RESISTOR	47kΩ,1／16W
R52	NRVA62D-222N	RESISTOR	2.2kΩ,1／16W
R53	QRSA08J-562YN	RESISTOR	5.6kΩ,1／10W
R54	NRVA62D-222N	RESISTOR	2.2kΩ,1／16W
R55	QRSA08J-684YN	RESISTOR	680kΩ,1／10W
R56	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R57	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R58	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
R59	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R60	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R61	QRSA08J-473YN	RESISTOR	47kΩ,1／10W
R62	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
R63	NRVA62D-222N	RESISTOR	2.2kΩ,1／16W
R64	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R65	QRSA08J-562YN	RESISTOR	5.6kΩ,1／10W
R66	NRVA62D-222N	RESISTOR	2.2kΩ,1／16W
R67	QRSA08J-684YN	RESISTOR	680kΩ,1／10W
R68	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R69	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R70	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
R71	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R72	QRSA08J-823YN	RESISTOR	82kΩ,1／10W
R73	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R74	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R75	QRSA08J-105YN	RESISTOR	1MΩ,1／10W
R76	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R77	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
R78	QRSA08J-0R0Y	RESISTOR	0Ω,1／10W
R79	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R80	QRSA08J-223YN	RESISTOR	22kΩ,1／10W
R81	QRSA08J-0R0Y	RESISTOR	0Ω,1／10W
R82	QRSA08J-222YN	RESISTOR	2.2kΩ,1／10W
R83	QRSA08J-822YN	RESISTOR	8.2kΩ,1／10W
R84	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
R85	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R86	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
R87	QRSA08J-681YN	RESISTOR	680Ω,1／10W
R88	QRSA08J-0R0Y	RESISTOR	0Ω,1／10W
R90	QRSA08J-473YN	RESISTOR	47kΩ,1／10W
R91	QRSA08J-473YN	RESISTOR	47kΩ,1／10W
R92	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
R93	QRSA08J-184YN	RESISTOR	180kΩ,1／10W
R94	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
R95	QRSA08J-103YN	RESISTOR	10kΩ,1／10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R96	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R97	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R98	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R99	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R100	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R101	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R102	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R103	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R104	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R105	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R106	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R107	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R108	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R109	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R110	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R111	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R112	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R113	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R118	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R119	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R120	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R121	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R122	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R123	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R124	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R125	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R126	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
R127	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R128	QRSA08J-152YN	RESISTOR	1.5kΩ,1/10W
R129	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R130	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R131	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R132	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R133	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R134	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R135	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R136	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R137	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R138	QRSA08J-101YN	RESISTOR	100Ω,1/10W
R202	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R203	QRSA08J-391YN	RESISTOR	390Ω,1/10W
R204	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R205	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R206	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R207	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R208	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R209	QRSA08J-153YN	RESISTOR	15kΩ,1/10W
R210	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R211	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R212	QRSA08J-224YN	RESISTOR	220kΩ,1/10W
R213	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
R214	QVPC625-103Z	V RESISTOR	10kΩ
R215	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
R216	QRSA08J-154YN	RESISTOR	150kΩ,1/10W
R217	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R218	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R219	QRSA08J-333YN	RESISTOR	33kΩ,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R220	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R221	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
R222	QVPC625-102Z	V RESISTOR	1kΩ
R223	QRSA08J-681YN	RESISTOR	680Ω,1/10W
R224	QRSA08J-271YN	RESISTOR	270Ω,1/10W
R225	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R226	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R227	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R228	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R229	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R230	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R231	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R232	QRSA08J-563YN	RESISTOR	56kΩ,1/10W
R233	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R234	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
R235	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R236	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R237	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R238	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R239	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R240	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R241	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R242	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R243	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R244	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R245	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R246	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R247	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R248	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R249	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R250	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R251	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R252	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R253	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R254	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R255	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R256	QRSA08J-121YN	RESISTOR	120Ω,1/10W
R260	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R261	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R262	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R263	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
R264	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R265	QRSA08J-274YN	RESISTOR	270kΩ,1/10W
R266	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R267	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R268	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R269	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
R270	QRSA08J-682YN	RESISTOR	6.8kΩ,1/10W
R271	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R272	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R273	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
R274	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R275	QRSA08J-474YN	RESISTOR	470kΩ,1/10W
R276	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R277	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R278	QRSA08J-223YN	RESISTOR	22kΩ,1/10W
R279	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R280	QRSA08J-121YN	RESISTOR	120Ω,1／10W
	R284	QRSA08J-473YN	RESISTOR	47kΩ,1／10W
	R285	QRSA08J-473YN	RESISTOR	47kΩ,1／10W
	R286	QRSA08J-153YN	RESISTOR	15kΩ,1／10W
	R287	QRSA08J-393YN	RESISTOR	39kΩ,1／10W
	R288	QRSA08J-221YN	RESISTOR	220Ω,1／10W
	R289	QRSA08J-121YN	RESISTOR	120Ω,1／10W
	R290	QRSA08J-121YN	RESISTOR	120Ω,1／10W
	R291	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R292	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R293	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R294	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R295	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R296	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R297	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R298	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R299	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R300	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R301	QRSA08J-563YN	RESISTOR	56kΩ,1／10W
	R302	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R303	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R304	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R305	QRSA08J-681YN	RESISTOR	680Ω,1／10W
	R306	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R307	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R308	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R309	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R314	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R315	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R316	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R317	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R318	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R319	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R320	QRSA08J-223YN	RESISTOR	22kΩ,1／10W
	R321	QRSA08J-183YN	RESISTOR	18kΩ,1／10W
	R322	QRSA08J-223YN	RESISTOR	22kΩ,1／10W
	R323	QRSA08J-183YN	RESISTOR	18kΩ,1／10W
	R324	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
⚠	R325	QRG019J-561S	OMF RESISTOR	560Ω,1W
	R326	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R327	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R328	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R329	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R330	QRSA08J-682YN	RESISTOR	6.8kΩ,1／10W
	R331	QRSA08J-223YN	RESISTOR	22kΩ,1／10W
	R332	QRX029J-R56A	MF RESISTOR	0.56Ω,2W
	R333	QRSA08J-221YN	RESISTOR	220Ω,1／10W
	R334	QRSA08J-221YN	RESISTOR	220Ω,1／10W
	R335	QRSA08J-472YN	RESISTOR	4.7kΩ,1／10W
	R336	QRSA08J-333YN	RESISTOR	33kΩ,1／10W
	R337	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
⚠	R338	QRG019J-561S	OMF RESISTOR	560Ω,1W
	R339	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R340	QRSA08J-102YN	RESISTOR	1kΩ,1／10W
	R341	QRSA08J-104YN	RESISTOR	100kΩ,1／10W
	R342	QRSA08J-103YN	RESISTOR	10kΩ,1／10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R343	QRSA08J-682YN	RESISTOR	6.8kΩ,1／10W
	R344	QRSA08J-223YN	RESISTOR	22kΩ,1／10W
	R345	QRSA08J-221YN	RESISTOR	220Ω,1／10W
	R346	QRX029J-R56A	MF RESISTOR	0.56Ω,2W
	R347	QRSA08J-221YN	RESISTOR	220Ω,1／10W
	R348	QRSA08J-823YN	RESISTOR	82kΩ,1／10W
⚠	R349	QRSA08J-182YN	RESISTOR	1.8kΩ,1／10W
	R350	QRSA08J-562YN	RESISTOR	5.6kΩ,1／10W
	R351	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R352	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R353	QRSA08J-103YN	RESISTOR	10kΩ,1／10W
	R354	QRSA08J-0R0Y	RESISTOR	0Ω,1／10W
	C1	QENC1CM-476	NP E CAPACITOR	47μF,16V
	C2	QETC1CM-476	E CAPACITOR	47μF,16V
	C3	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C4	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C5	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C6	QFP42AF-102M	PP CAPACITOR	0.001μF,100V
	C7	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C8	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C9	QFP42AF-102M	PP CAPACITOR	0.001μF,100V
	C10	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C11	QCTA1CH-271	CAPACITOR	270pF,16V
	C12	QCTA1CH-150	CAPACITOR	15pF,16V
	C13	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C14	QFN31HJ-473	M CAPACITOR	0.047μF,50V
	C15	QETC1CM-106	E CAPACITOR	10μF,16V
	C16	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C17	QETC1CM-476	E CAPACITOR	47μF,16V
	C18	QETC1CM-476	E CAPACITOR	47μF,16V
	C19	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C20	QCTA1CH-100	CAPACITOR	10pF,16V
	C21	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C22	QETC1CM-476	E CAPACITOR	47μF,16V
	C23	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C24	QCTA1CH-100	CAPACITOR	10pF,16V
	C25	QCTA1CH-101	CAPACITOR	100pF,16V
	C26	QCTA1CH-101	CAPACITOR	100pF,16V
	C27	QETC1CM-106	E CAPACITOR	10μF,16V
	C28	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C29	QCYA1HK-473	CAPACITOR	0.047μF,50V
	C30	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C31	QETC1HM-334	E CAPACITOR	0.33μF,50V
	C32	QCTA1CH-270	CAPACITOR	27pF,16V
	C33	QCTA1CH-470	CAPACITOR	47pF,16V
	C34	QCYA1HK-472	CAPACITOR	0.0047μF,50V
	C35	QCYA1HK-472	CAPACITOR	0.0047μF,50V
	C36	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C37	QETC1EM-475	E CAPACITOR	4.7μF,25V
	C38	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C39	QCFA1EZ-104	CAPACITOR	0.1μF,25V
	C40	QCTA1CH-101	CAPACITOR	100pF,16V
	C41	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C42	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C43	QCYA1HK-223	CAPACITOR	0.022μF,50V
	C44	QETC1CM-476	E CAPACITOR	47μF,16V

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
C45	QCYA1HK-223	CAPACITOR	0.022μF,50V
C46	QCYA1HK-223	CAPACITOR	0.022μF,50V
C47	QCYA1HK-223	CAPACITOR	0.022μF,50V
C48	QCFA1CZ-334Z	CAPACITOR	0.33μF,16V
C49	QCFA1CZ-334Z	CAPACITOR	0.33μF,16V
C50	QETC1CM-476	E CAPACITOR	47μF,16V
C51	QCYA1HK-223	CAPACITOR	0.022μF,50V
C52	QCYA1HK-223	CAPACITOR	0.022μF,50V
C53	QCYA1HK-102	CAPACITOR	0.001μF,50V
C54	QCYA1HK-223	CAPACITOR	0.022μF,50V
C55	QCYA1HK-223	CAPACITOR	0.022μF,50V
C56	QCYA1HK-223	CAPACITOR	0.022μF,50V
C57	QCYA1HK-223	CAPACITOR	0.022μF,50V
C58	QCYA1HK-223	CAPACITOR	0.022μF,50V
C59	QCYA1HK-223	CAPACITOR	0.022μF,50V
C60	QCYA1HK-223	CAPACITOR	0.022μF,50V
C61	QCYA1HK-223	CAPACITOR	0.022μF,50V
C62	QCYA1HK-223	CAPACITOR	0.022μF,50V
C63	QCYA1HK-223	CAPACITOR	0.022μF,50V
C64	QCYA1HK-223	CAPACITOR	0.022μF,50V
C65	QCYA1HK-223	CAPACITOR	0.022μF,50V
C66	QCYA1HK-223	CAPACITOR	0.022μF,50V
C67	QCYA1HK-223	CAPACITOR	0.022μF,50V
C68	QCTA1CH-101	CAPACITOR	100pF,16V
C69	QCTA1CH-101	CAPACITOR	100pF,16V
C70	QCTA1CH-101	CAPACITOR	100pF,16V
C71	QCTA1CH-101	CAPACITOR	100pF,16V
C72	QCTA1CH-101	CAPACITOR	100pF,16V
C73	QCTA1CH-101	CAPACITOR	100pF,16V
C74	QCTA1CH-101	CAPACITOR	100pF,16V
C75	QCTA1CH-101	CAPACITOR	100pF,16V
C76	QCTA1CH-101	CAPACITOR	100pF,16V
C77	QCTA1CH-101	CAPACITOR	100pF,16V
C79	QCTA1CH-101	CAPACITOR	100pF,16V
C80	QCTA1CH-101	CAPACITOR	100pF,16V
C81	QCTA1CH-101	CAPACITOR	100pF,16V
C82	QCTA1CH-101	CAPACITOR	100pF,16V
C83	QCTA1CH-101	CAPACITOR	100pF,16V
C84	QCTA1CH-101	CAPACITOR	100pF,16V
C85	QCTA1CH-101	CAPACITOR	100pF,16V
C86	QCTA1CH-101	CAPACITOR	100pF,16V
C87	QCTA1CH-101	CAPACITOR	100pF,16V
C88	QCTA1CH-101	CAPACITOR	100pF,16V
C89	QCTA1CH-101	CAPACITOR	100pF,16V
C90	QCTA1CH-101	CAPACITOR	100pF,16V
C91	QCTA1CH-101	CAPACITOR	100pF,16V
C92	QCTA1CH-101	CAPACITOR	100pF,16V
C93	QCTA1CH-101	CAPACITOR	100pF,16V
C94	QCTA1CH-101	CAPACITOR	100pF,16V
C95	QCTA1CH-101	CAPACITOR	100pF,16V
C96	QCTA1CH-101	CAPACITOR	100pF,16V
C101	QCYA1HK-102	CAPACITOR	0.001μF,50V
C102	QCYA1HK-103	CAPACITOR	0.01μF,50V
C103	QETC1CM-476	E CAPACITOR	47μF,16V
C104	QCYA1HK-223	CAPACITOR	0.022μF,50V
C105	QCYA1HK-223	CAPACITOR	0.022μF,50V
C106	QCYA1HK-223	CAPACITOR	0.022μF,50V
C107	QFN31HJ-104	M CAPACITOR	0.1μF,50V
C108	QCTA1CH-821	CAPACITOR	820pF,16V
C109	QCYA1HK-102	CAPACITOR	0.001μF,50V
C110	QCYA1HK-102	CAPACITOR	0.001μF,50V
C111	QCYA1HK-223	CAPACITOR	0.022μF,50V
C112	QCYA1HK-223	CAPACITOR	0.022μF,50V
C113	QCYA1HK-103	CAPACITOR	0.01μF,50V
C114	QCFA1EZ-104	CAPACITOR	0.1μF,25V
C115	QCYA1HK-223	CAPACITOR	0.022μF,50V
C116	QETC1CM-476	E CAPACITOR	47μF,16V
C117	QCYA1HK-223	CAPACITOR	0.022μF,50V
C118	QETC1CM-476	E CAPACITOR	47μF,16V
C119	QETC1CM-106	E CAPACITOR	10μF,16V
C120	QCYA1HK-223	CAPACITOR	0.022μF,50V
C121	QETC1CM-106	E CAPACITOR	10μF,16V
C122	QCYA1HK-223	CAPACITOR	0.022μF,50V
C123	QCYA1HK-223	CAPACITOR	0.022μF,50V
C124	QCYA1HK-103	CAPACITOR	0.01μF,50V
C125	QCYA1HK-103	CAPACITOR	0.01μF,50V
C126	QCYA1HK-102	CAPACITOR	0.001μF,50V
C127	QCYA1HK-103	CAPACITOR	0.01μF,50V
C130	QCFA1EZ-104	CAPACITOR	0.1μF,25V
C131	QCYA1HK-223	CAPACITOR	0.022μF,50V
C132	QCTA1CH-7R0	CAPACITOR	7pF,16V
C133	QCYA1HK-223	CAPACITOR	0.022μF,50V
C134	QCFA1EZ-104	CAPACITOR	0.1μF,25V
C135	QCTA1CH-7R0	CAPACITOR	7pF,16V
C138	QCFA1EZ-104	CAPACITOR	0.1μF,25V
C139	QCTA1CH-7R0	CAPACITOR	7pF,16V
C140	QCYA1HK-223	CAPACITOR	0.022μF,50V
C141	QCYA1HK-223	CAPACITOR	0.022μF,50V
C142	QCFA1EZ-104	CAPACITOR	0.1μF,25V
C143	QCTA1CH-7R0	CAPACITOR	7pF,16V
C146	QCYA1HK-223	CAPACITOR	0.022μF,50V
C147	QETC1CM-476	E CAPACITOR	47μF,16V
C148	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C149	QCYA1HK-472	CAPACITOR	0.0047μF,50V
C150	QCYA1HK-103	CAPACITOR	0.01μF,50V
C151	QCYA1HK-103	CAPACITOR	0.01μF,50V
C152	QCYA1HK-103	CAPACITOR	0.01μF,50V
C153	QCYA1HK-102	CAPACITOR	0.001μF,50V
C154	QCYA1HK-103	CAPACITOR	0.01μF,50V
C155	QCYA1HK-103	CAPACITOR	0.01μF,50V
C156	QCYA1HK-103	CAPACITOR	0.01μF,50V
C157	QCYA1HK-223	CAPACITOR	0.022μF,50V
C158	QETC1VM-227	E CAPACITOR	220μF,35V
C159	QETC1EM-476	E CAPACITOR	47μF,25V
C160	QCYA1HK-223	CAPACITOR	0.022μF,50V
C161	QETC1CM-476	E CAPACITOR	47μF,16V
C162	QCYA1HK-223	CAPACITOR	0.022μF,50V
C163	QCYA1HK-223	CAPACITOR	0.022μF,50V
C164	QETC1CM-476	E CAPACITOR	47μF,16V
C165	QCYA1HK-223	CAPACITOR	0.022μF,50V
C166	QETC1CM-476	E CAPACITOR	47μF,16V
C167	QCYA1HK-223	CAPACITOR	0.022μF,50V
C168	QCYA1HK-223	CAPACITOR	0.022μF,50V
C169	QCYA1HK-223	CAPACITOR	0.022μF,50V

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#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C170	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C171	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C172	QETC1EM-107	E CAPACITOR	100 μF,25V
	C173	QEZ0139-107Z	E CAPACITOR	100 μF
	C174	QEZ0139-107Z	E CAPACITOR	100 μF
	C175	QEZ0139-107Z	E CAPACITOR	100 μF
	C176	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C177	QETC1CM-106	E CAPACITOR	10 μF,16V
	C178	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C179	QETC1EM-476	E CAPACITOR	47 μF,25V
	C180	QFV11HJ-104	MM CAPACITOR	0.1 μF,50V
	C181	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C183	QFV11HJ-104	MM CAPACITOR	0.1 μF,50V
	C184	QFV11HJ-104	MM CAPACITOR	0.1 μF,50V
	C185	QFV11HJ-154	TF CAPACITOR	0.15 μF,50V
	C186	QFV11HJ-154	TF CAPACITOR	0.15 μF,50V
	C187	QFV11HJ-154	TF CAPACITOR	0.15 μF,50V
	C188	QETC1HM-475	E CAPACITOR	4.7 μF,50V
	C189	QETC1HM-475	E CAPACITOR	4.7 μF,50V
	C190	QETC1HM-475	E CAPACITOR	4.7 μF,50V
	C191	QCYA1HK-472	CAPACITOR	0.0047 μF,50V
	C192	QCYA1HK-472	CAPACITOR	0.0047 μF,50V
	C193	QCYA1HK-472	CAPACITOR	0.0047 μF,50V
	C194	QETC1VM-227	E CAPACITOR	220 μF,35V
	C195	QETC1VM-227	E CAPACITOR	220 μF,35V
	C196	QEZ0139-107Z	E CAPACITOR	100 μF
	C197	QEZ0139-107Z	E CAPACITOR	100 μF
	C198	QEZ0139-107Z	E CAPACITOR	100 μF
	C199	QETC1CM-106	E CAPACITOR	10 μF,16V
	C200	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C201	QETC1EM-476	E CAPACITOR	47 μF,25V
	C202	QFV11HJ-104	MM CAPACITOR	0.1 μF,50V
	C203	QCYA1HK-223	CAPACITOR	0.022 μF,50V
	C205	QFV11HJ-104	MM CAPACITOR	0.1 μF,50V
	C206	QFV11HJ-104	MM CAPACITOR	0.1 μF,50V
	C207	QFV11HJ-154	TF CAPACITOR	0.15 μF,50V
	C208	QFV11HJ-154	TF CAPACITOR	0.15 μF,50V
	C209	QFV11HJ-154	TF CAPACITOR	0.15 μF,50V
	C210	QETC1HM-475	E CAPACITOR	4.7 μF,50V
	C211	QETC1HM-475	E CAPACITOR	4.7 μF,50V
	C212	QETC1HM-475	E CAPACITOR	4.7 μF,50V
	C213	QCYA1HK-472	CAPACITOR	0.0047 μF,50V
	C214	QCYA1HK-472	CAPACITOR	0.0047 μF,50V
	C215	QCYA1HK-472	CAPACITOR	0.0047 μF,50V
	C216	QCFA1EZ-104	CAPACITOR	0.1 μF,25V
	C217	QCFA1EZ-104	CAPACITOR	0.1 μF,25V
	C218	QCFA1EZ-104	CAPACITOR	0.1 μF,25V
	C219	QCFA1EZ-104	CAPACITOR	0.1 μF,25V
	L1	PU48530-271J	COIL	270 μH
	L2	PU48530-271J	COIL	270 μH
	L3	PU50277	COIL	
	L4	PU48530-271J	COIL	270 μH
	L21	PU50277	COIL	
	L22	PU48530-271J	COIL	270 μH
	L23	PU48530-271J	COIL	270 μH

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	L25	PU48530-271J	COIL	270 μH
	L26	PU50277	COIL	
	L27	PU48530-271J	COIL	270 μH
	L28	PU48530-271J	COIL	270 μH
	L29	PU48530-271J	COIL	270 μH
	L30	PU50277	COIL	
	L31	PGZ01998	COIL	
	L32	PGZ01990	COIL	
	L33	PU50277	COIL	
	L34	PGZ01998	COIL	
	L35	PGZ01990	COIL	
⚠	X1	PEVB0335	CRYSTAL RESONATOR	
⚠	K1	PU60281-2Z	FERRATE BEADS, ×2(K1,K2)	
	HS1	PQ45789	HEAT SINK	
	HS2	PQ45789	HEAT SINK, ×2	
	SCW1	DPSP3008Z	SCREW, ×2	
	SCW2	SBSB3010Z	SCREW, ×4	
	SKT1	PGZ01724-028	IC SOCKET	
	SLD2	PRS20010	SHIELD CASE	
	TP1	SQMX001-001Z	TEST PIN, ×7	
	CN1	PU59973-18	CONNECTOR	
	CN2	PU59555-3	CONNECTOR	
	CN3	PU59555-8	CONNECTOR	
	CN4	PU59555-6	CONNECTOR	
	CN5	PU59555-10	CONNECTOR	
	CN6	PU59555-5	CONNECTOR	
	CN7	PU59973-18	CONNECTOR	
	CN8	PU59555-104	CONNECTOR	
	CN21	PU59555-5	CONNECTOR	
	CN22	PU59555-4	CONNECTOR	
	CN23	PU59555-2	CONNECTOR	
	CN24	PU59555-2	CONNECTOR	
	CN25	PU59555-6	CONNECTOR	
	CN26	PU59555-9	CONNECTOR	
	CN27	PU59555-4	CONNECTOR	
	CN28	PU59555-3	CONNECTOR	
	CN29	PU59555-10	CONNECTOR	
	CN30	PU59555-7	CONNECTOR	
	CN31	PU59555-10	CONNECTOR	
	CN32	PU59555-7	CONNECTOR	
⚠	CP1	ICP-F10	CIRCUIT PROTECTOR	
⚠	CP2	ICP-F10	CIRCUIT PROTECTOR	

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
⚠	CP3	ICP-F10	CIRCUIT PROTECTOR	

SYSCON BOARD ASSEMBLY <31>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK20214A-01	SYSCON BOARD ASSY, BR-S800	
	PWBA	PRK20214B-01	SYSCON BOARD ASSY, BR-S500	
	IC1	SC78148GF-037	IC	
	IC2	PGD30620C-9-1	IC	
	IC3	BR24C01AF	IC	
	IC4	TC74HC373AF	IC	
	IC5	TC74HC00AF	IC	
	IC6	TC74HC00AF	IC	
	IC7	TC74HC04AF	IC	
	IC8	TC74HC30AF	IC	
	IC9	M51957BFP	IC	
	Q1	DTC144EK	TRANSISTOR	
	D1	DA204K	DIODE	
	D2	DA204K	DIODE	
	D3	DA204K	DIODE	
	D4	DA204K	DIODE	
	D5	DA204K	DIODE	
	R6	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R7	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R8	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R9	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R10	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R11	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R12	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R13	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R14	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R15	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R16	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R17	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R18	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R19	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R20	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R21	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R22	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R23	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R24	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R25	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R26	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R27	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R28	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R29	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R30	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R31	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R32	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R33	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R34	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R35	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R36	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R37	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R41	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R42	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R43	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R45	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R46	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R50	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R51	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R52	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R53	QRSA08J-333YN	RESISTOR	33kΩ,1/10W
	R55	QRSA08J-473YN	RESISTOR, BR-S500	47kΩ,1/10W
	R57	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R60	QRSA08J-183YN	RESISTOR	18kΩ,1/10W
	R61	QRSA08J-273YN	RESISTOR	27kΩ,1/10W
	R62	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R64	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R65	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R66	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R67	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R68	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R69	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R70	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R71	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R72	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R73	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R74	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R75	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R76	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R77	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R78	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R80	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R81	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R82	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R83	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R84	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R85	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R86	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R91	QRSA08J-0R0Y	RESISTOR, BR-S800	0Ω,1/10W
	R92	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R95	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R101	QRSA08J-473YN	RESISTOR	47kΩ,1/10W
	R111	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R112	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R113	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R114	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R115	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R116	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R117	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R118	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R119	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R120	QRSA08J-101YN	RESISTOR	100Ω,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R121	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R122	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R123	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R124	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R125	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R126	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	C1	QER61CM-226	E CAPACITOR	22μF,16V
	C2	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C3	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C4	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C5	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C6	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C7	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C8	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C9	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C12	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C13	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C14	QCYA1EK-104	CAPACITOR	0.1μF,25V
	C15	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C16	QCTA1CH-220	CAPACITOR	22pF,16V
	C17	QCTA1CH-220	CAPACITOR	22pF,16V
	C18	QCYA1HK-221	CAPACITOR	220pF,50V
	C19	QCYA1HK-221	CAPACITOR	220pF,50V
	C20	QCYA1HK-221	CAPACITOR	220pF,50V
	C21	QCYA1HK-221	CAPACITOR	220pF,50V
	C23	QCYA1HK-221	CAPACITOR	220pF,50V
	C26	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C30	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C31	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C32	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C33	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C34	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C35	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C36	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C51	QCTA1CH-101	CAPACITOR	100pF,16V
	C52	QCTA1CH-101	CAPACITOR	100pF,16V
	C53	QCTA1CH-101	CAPACITOR	100pF,16V
	C54	QCTA1CH-101	CAPACITOR	100pF,16V
	C55	QCTA1CH-101	CAPACITOR	100pF,16V
	C56	QCTA1CH-101	CAPACITOR	100pF,16V
	C57	QCTA1CH-101	CAPACITOR	100pF,16V
	C58	QCTA1CH-101	CAPACITOR	100pF,16V
	C59	QCTA1CH-101	CAPACITOR	100pF,16V
	C61	QCTA1CH-101	CAPACITOR	100pF,16V
	C62	QCTA1CH-101	CAPACITOR	100pF,16V
	C63	QCTA1CH-101	CAPACITOR	100pF,16V
	C64	QCTA1CH-101	CAPACITOR	100pF,16V
	C65	QCTA1CH-101	CAPACITOR	100pF,16V
	C66	QCTA1CH-101	CAPACITOR	100pF,16V
	C67	QCTA1CH-101	CAPACITOR	100pF,16V
	C68	QCTA1CH-101	CAPACITOR	100pF,16V
	C69	QCTA1CH-101	CAPACITOR	100pF,16V
	C70	QCTA1CH-101	CAPACITOR	100pF,16V
	C71	QCTA1CH-101	CAPACITOR	100pF,16V
	C72	QCTA1CH-101	CAPACITOR	100pF,16V
	C73	QCTA1CH-101	CAPACITOR	100pF,16V
	C74	QCTA1CH-101	CAPACITOR	100pF,16V
	C75	QCTA1CH-101	CAPACITOR	100pF,16V
	C76	QCTA1CH-101	CAPACITOR	100pF,16V
	C77	QCTA1CH-101	CAPACITOR	100pF,16V
	L1	PGZ00617-221	COIL	
⚠	X1	PGZ00513	CERAMIC FILTER	
⚠	K1	PGZ00354	FERRATE BEADS	
⚠	K2	PGZ00354	FERRATE BEADS	
	SKT1	PGZ01724-028	IC SOCKET	
⚠	SLD1	PRS30039	SHIELD CASE	
	SLD2	PGZ01128-02	SPACER, × 2	
	CN1	PGZ01937-64	MALE CONNECTOR	

OPERATION-CPU BOARD ASSEMBLY <32>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK10151A1-02	OPERATION-CPU BOARD ASSY	
	METER1	PGZ01337-02	METER	
	METER2	PGZ01336-02	METER	
	Q1	DTC144EK	TRANSISTOR	
	D1	SLV-56YC3F	LE DIODE	
	D2	SLV-56YC3F	LE DIODE	
	D3	SLV-56YC3F	LE DIODE	
	D6	SLV-56YC3F	LE DIODE	
	D7	SLV-56YC3F	LE DIODE	
	D8	SLV-56YC3F	LE DIODE	
	R2	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R3	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R20	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R21	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R22	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	R23	QRSA08J-681YN	RESISTOR	680Ω,1/10W
	C1	QER61CM-476	E CAPACITOR	47μF,16V
	C2	QCYA1HK-223	CAPACITOR	0.022μF,50V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C3	QER61CM-476	E CAPACITOR	47μF,16V
	C4	QCYA1HK-223	CAPACITOR	0.022μF,50V
	L1	PGZ00617-221	COIL	
	L2	PGZ00617-221	COIL	
	SPC1	PRD30597	SHADE, ×2 (FOR METER)	
	CN1	PGZ01942-10	CONNECTOR	
	CN2	PGZ01942-10	CONNECTOR	
	CN3	PGZ01942-10	CONNECTOR	
	CN4	PGZ01942-10	CONNECTOR	
	CN5	PU59973-18	CONNECTOR	
	CN6	PU59973-24	CONNECTOR	
	CN7	PU59973-18	CONNECTOR	

OPERATION-VR BOARD ASSEMBLY <33>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK10151A2-02	OPERATION-VR BOARD ASSY,S800	
	PWBA	PRK10151B2-02	OPERATION-VR BOARD ASSY,S500	
	IC11	M5218AFP-XE1	IC	
	IC12	BA3308F	IC, BR-S800	
	Q11	DTA144EK	TRANSISTOR	
	Q12	DTC144EK	TRANSISTOR	
	Q13	DTC323TK	TRANSISTOR	
	Q14	DTC323TK	TRANSISTOR	
	D11	DAN202K	DIODE	
	D12	DAN202K	DIODE	
	D13	DAN202K	DIODE	
	R36	QRSA08J-332YN	RESISTOR, BR-S800	3.3kΩ,1/10W
	R37	QRSA08J-392YN	RESISTOR, BR-S800	3.9kΩ,1/10W
	R38	QRSA08J-105YN	RESISTOR, BR-S800	1MΩ,1/10W
	R39	QRSA08J-152YN	RESISTOR, BR-S800	1.5kΩ,1/10W
	R40	QRSA08J-152YN	RESISTOR, BR-S800	1.5kΩ,1/10W
	R41	QRSA08J-823YN	RESISTOR, BR-S800	82kΩ,1/10W
	R42	QRSA08J-221YN	RESISTOR, BR-S800	220Ω,1/10W
	R51	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R52	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R53	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R56	QRSA08J-330YN	RESISTOR	33Ω,1/10W
	R57	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R60	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R61	QRSA08J-330YN	RESISTOR	33Ω,1/10W
	R64	QRSA08J-104YN	RESISTOR	100kΩ,1/10W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R65	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	R66	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
⚠	R67	QRZ0077-101X	FUSIBLE RESISTOR	100Ω,1/4W
	R68	QRSA08J-104YN	RESISTOR	100kΩ,1/10W
	VR11	PGZ01964	V RESISTOR, BR-S800	
	VR12	PGZ01964	V RESISTOR, BR-S800	
	VR13	PGZ01964	V RESISTOR, BR-S800	
	VR14	PGZ01964	V RESISTOR, BR-S800	
	VR15	PGZ01966	V RESISTOR	
	VR16	PGZ01965	V RESISTOR	
	R171	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R172	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R173	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R174	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R175	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R176	QRSA08J-121YN	RESISTOR	120Ω,1/10W
	R181	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R182	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R183	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R184	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R185	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R186	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R187	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R188	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R189	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	R190	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	C7	QCTA1CH-101	CAPACITOR, BR-S800	100pF,16V
	C8	QER61HM-105	E CAPACITOR, BR-S800	1μF,50V
	C9	QER61CM-476	E CAPACITOR, BR-S800	47μF,16V
	C10	QCTA1CH-101	CAPACITOR, BR-S800	100pF,16V
	C11	QCTA1CH-121	CAPACITOR, BR-S800	120pF,16V
	C12	QER61CM-106	E CAPACITOR, BR-S800	10μF,16V
	C13	QCTA1CH-101	CAPACITOR, BR-S800	100pF,16V
	C14	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
	C15	QCYA1HK-103	CAPACITOR, BR-S800	0.01μF,50V
	C52	QCYA1HK-103	CAPACITOR	0.01μF,50V
	C53	QER61AM-476	E CAPACITOR	47μF,10V
	C57	QER61CM-475	E CAPACITOR	4.7μF,16V
	C58	QER61CM-475	E CAPACITOR	4.7μF,16V
	C59	QER61CM-476	E CAPACITOR	47μF,16V
	C60	QER61AM-476	E CAPACITOR	47μF,10V
	SW1	PGZ01478	SLIDE SWITCH	
	SW2	PGZ00470-02	SLIDE SWITCH	
	SW3	PGZ00469-02	SLIDE SWITCH	
	SW4	PGZ00469-02	SLIDE SWITCH, BR-S800	
	SW5	PGZ00470-02	SLIDE SWITCH	
	SW6	PGZ00469-02	SLIDE SWITCH	
⚠	K1	PGZ00354	FERRATE BEADS	
⚠	K2	PGZ01976	NOISE FILTER	
⚠	K3	PGZ01976	NOISE FILTER	

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
⚠	K4	PGZ00354	FERRATE BEADS
⚠	K5	PGZ01976	NOISE FILTER
	K6	PGZ01976	NOISE FILTER
	K7	PGZ01976	NOISE FILTER
	K8	PGZ01976	NOISE FILTER
⚠	BKT1	PRD44290-01-01	BRACKET, (FOR VR), BR-S800
	J1	PU60664	MINI JACK
	J2	PU60664-3	MINI JACK, BR-S800
	J3	PGZ01516	FEMALE CONNECTOR
	J4	PGZ01947	1P JACK
	SPC1	PU60010	SPACER, × 2
	STK1	PRD30072-86	STICKER, (FOR ICP-F25)
	VA1	PU49624-2	VARISTOR
	CN11	PU60711-118	CONNECTOR
	CN12	PU60711-124	CONNECTOR
⚠	CP1	ICP-F15	CIRCUIT PROTECTOR

OPERATION-SW BOARD ASSEMBLY <34>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK10151A3-02	OPERATION-SW BOARD ASSY,S800	
	PWBA	PRK10151B3-02	OPERATION-SW BOARD ASSY,S500	
	HLD1	PQ43191	LED HOLDER, × 9(S800), × 7(S500)	
	IC21	M50255P	IC	
	Q21	DTB143TK	TRANSISTOR	
	Q22	DTB143TK	TRANSISTOR	
	Q23	DTB143TK	TRANSISTOR	
	Q24	DTB143TK	TRANSISTOR	
	Q25	DTB143TK	TRANSISTOR	
	Q26	DTB143TK	TRANSISTOR	
	Q27	DTB143TK	TRANSISTOR	
	Q28	DTB143TK	TRANSISTOR	
	Q29	DTC144EK	TRANSISTOR	
	Q30	DTC144EK	TRANSISTOR	
	Q31	DTC144EK	TRANSISTOR	
	Q32	DTC144EK	TRANSISTOR	
	Q33	DTC144EK	TRANSISTOR	
	Q34	DTC144EK	TRANSISTOR	
	Q35	DTC144EK	TRANSISTOR	
	Q36	DTC144EK	TRANSISTOR	
	D31	SLR-55MC3F	LE DIODE	
	D32	SLR-55MC3F	LE DIODE	
	D33	SLR-55MC3F	LE DIODE	
	D34	SLR-55MC3F	LE DIODE	
	D35	SLR-55MC3F	LE DIODE	
	D36	SLR-55MC3F	LE DIODE	
	D37	SLR-55MC3F	LE DIODE	
	D38	GL-8TR21	LE DIODE	
	D39	GL-8TR21	LE DIODE, BR-S800	
	D40	GL-8TR21	LE DIODE, BR-S800	
	D41	GL-8TR21	LE DIODE	
	D42	GL-8TR21	LE DIODE	
	D43	GL-8TR21	LE DIODE	
	D44	GL-8TR21	LE DIODE	
	D45	GL-8TR21	LE DIODE	
	D46	GL-8TR21	LE DIODE	
	D61	DAN202K	DIODE	
	D62	DAN202K	DIODE	
	D63	DAN202K	DIODE	
	D64	DAN202K	DIODE	
	D65	DAN202K	DIODE	
	D66	DAN202K	DIODE	
	D67	DAN202K	DIODE	
	D68	DAN202K	DIODE	
	D81	DAN202K	DIODE	
	D82	DAN202K	DIODE	
	D83	DAN202K	DIODE	
	D84	DAN202K	DIODE	
	D85	DAN202K	DIODE	
	D91	LB-302VF2	LE DIODE	
	D92	LB-302VF2	LE DIODE	
	D93	LB-302VF2	LE DIODE	
	R71	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R72	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R73	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R74	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R75	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R76	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R77	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R78	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R79	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R80	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R81	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R82	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R83	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R84	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R85	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R86	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R87	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R88	QRSA08J-101YN	RESISTOR	100Ω,1/10W
	R91	QRSA08J-221YN	RESISTOR	220Ω,1/10W
	R92	QRSA08J-221YN	RESISTOR	220Ω,1/10W

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
R93	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R94	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R95	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R96	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R97	QRSA08J-221YN	RESISTOR	220Ω,1/10W
R98	QRSA08J-221YN	RESISTOR	220Ω,1/10W
C71	QCYA1HK-103	CAPACITOR	0.01μF,50V
SW11	PESW0525-02Z	TACT SWITCH	
SW12	PESW0525-02Z	TACT SWITCH	
SW13	PESW0525-02Z	TACT SWITCH	
SW14	PESW0525-02Z	TACT SWITCH	
SW15	PESW0525-02Z	TACT SWITCH	
SW16	PESW0525-02Z	TACT SWITCH	
SW17	PESW0525-02Z	TACT SWITCH	
SW18	PESW0525-02Z	TACT SWITCH	
SW19	PESW0525-02Z	TACT SWITCH	
SW20	PESW0525-02Z	TACT SWITCH	
SW21	PESW0525-02Z	TACT SWITCH, BR-S800	
SW22	PESW0525-02Z	TACT SWITCH, BR-S800	
SW23	PESW0525-02Z	TACT SWITCH	
SW24	PESW0525-02Z	TACT SWITCH	
SPC1	PU50633-3	LED SPACER, ×7	
SPC2	PRD44204	LED SPACER, ×3	
CN21	PU60711-118	CONNECTOR	
CN22	PU60910-6	CONNECTOR	

OPERATION-DIAL BOARD ASSEMBLY <35>

#⚠REF No.	PART No.	PART NAME, DESCRIPTION
PWBA	PRK10151A4-02	OPERATION-DIAL BOARD ASSY
SW31	PGZ00153-1-1	R.CODE SWITCH

REAR BOARD ASSEMBLY <40>

#⚠REF No.	PART No.	PART NAME, DESCRIPTION	
PWBA	PRK20234C	REAR BOARD ASSY, BR-S800	
PWBA	PRK20234D	REAR BOARD ASSY, BR-S500	
D1	RD10ES-T1B1	ZENER DIODE, BR-S800	
D2	RD10ES-T1B1	ZENER DIODE, BR-S800	
D3	RD10ES-T1B1	ZENER DIODE, BR-S800	
D4	RD10ES-T1B1	ZENER DIODE, BR-S800	
D5	RD10ES-T1B1	ZENER DIODE	
D6	RD10ES-T1B1	ZENER DIODE	
D7	RD10ES-T1B1	ZENER DIODE	
D8	RD10ES-T1B1	ZENER DIODE	
D9	RD10ES-T1B1	ZENER DIODE, BR-S800	
D10	RD10ES-T1B1	ZENER DIODE, BR-S800	
D11	RD10ES-T1B1	ZENER DIODE, BR-S800	
D12	RD10ES-T1B1	ZENER DIODE, BR-S800	
D13	RD10ES-T1B1	ZENER DIODE	
D14	RD10ES-T1B1	ZENER DIODE	
D15	RD10ES-T1B1	ZENER DIODE	
D16	RD10ES-T1B1	ZENER DIODE	
D17	RD10ES-T1B1	ZENER DIODE	
D18	RD10ES-T1B1	ZENER DIODE	
D19	RD10ES-T1B1	ZENER DIODE	
D20	RD10ES-T1B1	ZENER DIODE	
D21	RD10ES-T1B1	ZENER DIODE, BR-S800	
D22	RD10ES-T1B1	ZENER DIODE, BR-S800	
D23	RD10ES-T1B1	ZENER DIODE	
D24	RD10ES-T1B1	ZENER DIODE	
D25	RD10ES-T1B1	ZENER DIODE	
D26	RD10ES-T1B1	ZENER DIODE	
D27	RD10ES-T1B1	ZENER DIODE, BR-S800	
D28	RD10ES-T1B1	ZENER DIODE, BR-S800	
D29	RD10ES-T1B1	ZENER DIODE, BR-S800	
D30	RD10ES-T1B1	ZENER DIODE, BR-S800	
D31	RD10ES-T1B1	ZENER DIODE	
D32	RD10ES-T1B1	ZENER DIODE	
D33	RD10ES-T1B1	ZENER DIODE	
D34	RD10ES-T1B1	ZENER DIODE	
R1	QRD161J-750	RESISTOR	75Ω,1/6W
SW1	PGZ00469-02	SLIDE SWITCH, BR-S500	
SW2	PGZ00470-02	SLIDE SWITCH, BR-S800	
K1	PU60281-2Z	FE. BEADS, ×4(800), ×1(500)	
BKT1	PRD20482-03	PANEL, BR-S800	
BKT1	PRD20482-04	PANEL, BR-S500	
SCW1	SDSF3010R	SCREW, ×9(S800), ×7(S500)	
SCW2	SDST3008Z	SCREW, ×2	
CN1	PGZ01942-10	CONNECTOR	
CN2	PGZ01942-10	CONNECTOR	
CN3	PGZ01942-10	CONNECTOR	
CN4	PGZ01942-10	CONNECTOR	
CN5	PGZ01946	4P JACK, BR-S800	
CN5	PGZ01949	2P JACK, BR-S500	
CN6	PGZ01946	4P JACK, BR-S800	
CN6	PGZ01949	2P JACK, BR-S500	
CN7	PGZ01947	1P JACK	
CN8	PGZ01948	4P BNC CONNECTOR, BR-S800	
CN8	PGZ01950	3P BNC CONNECTOR, BR-S500	
CN9	PGZ01531	S-TERMINAL CONNECTOR	
CN10	PGZ01531	S-TERMINAL CONNECTOR, BR-S800	

END SENSOR BOARD ASSEMBLY <50>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK20225A1-01	END SENSOR BOARD ASSY, S800	
	PWBA	PRK20225B1	END SENSOR BOARD ASSY, S500	
	Q1	2SD1423(RS)	TRANSISTOR, BR-S800	
	Q2	2SB1030R,S	TRANSISTOR, BR-S800	
	Q3	DTC124ES	TRANSISTOR, BR-S800	
	D1	HZ3BLL	DIODE, BR-S800	
	R1	QRD161J-223	RESISTOR, BR-S800	22kΩ,1/6W
	R2	QRD161J-6R8	RESISTOR, BR-S800	6.8Ω,1/6W
	R3	QRD161J-473	RESISTOR, BR-S800	47kΩ,1/6W
	R4	QRD161J-472	RESISTOR, BR-S800	4.7kΩ,1/6W
	C1	QFN31HJ-332	M CAPACITOR, S800	0.0033μF,50V
	C2	QFN31HJ-102	M CAPACITOR, S800	0.001μF,50V
	C3	QFP42AJ-333	PP CAPACITOR, S800	0.033μF,100V
	C4	QETC1CM-106	E CAPACITOR, S800	10μF,16V
	PS1	PU61321-1-1	TAPE SENSOR	
⚠	T1	PU60321	OSC TRANSFORMER, BR-S800	
	CN1	PU59555-2	CONNECTOR, BR-S800	
	CN2	PU59555-5	CONNECTOR	

REC SAFETY BOARD ASSEMBLY <51>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20225A2	REC SAFE BOARD SWITCH, S800
	SW1	PU61319	REC SAFETY SWITCH, BR-S800
	CN3	PU59555-102	CONNECTOR, BR-S800

S-SWITCH BOARD ASSEMBLY <52>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20225A4	S-SWITCH BOARD ASSY, BR-S800
	SW1	PU61008	CASSETTE SWITCH, BR-S800
	CN4	PU59555-102	CONNECTOR, BR-S800

MODE MOTOR BOARD ASSEMBLY <53>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK20225A3	MODE MOTOR BOARD ASSY	
	C5	QCF31HP-223	CAPACITOR	0.022μF,50V
	CN5	PU59555-2	CONNECTOR	

CASSETTE HOUSING BOARD ASSY <54>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20255A-01	HOUSING BOARD ASSY
	Q1	PN268VI	PHOTO TRANSISTOR
	SW1	YU40177-2	PUSH SWITCH
	SW2	YU40177-2	PUSH SWITCH
	CN1	PU59555-106	CONNECTOR

MECHA TERMINAL BOARD ASSEMBLY <55>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20225A5	MECHA TERMINAL BOARD ASSY
	CN6	PU59555-9	CONNECTOR
	CN7	PU59555-2	CONNECTOR
	CN8	PU59555-2	CONNECTOR
	CN9	PU59555-2	CONNECTOR
	CN10	PU59555-3	CONNECTOR

A/C HEAD BOARD ASSEMBLY <56>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	PWBA	PRK20225A6	A/C HEAD BOARD ASSY

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	CN11	PU59555-111	CONNECTOR	

PRIMARY BOARD ASSEMBLY <60>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK10157A1	PRIMARY BOARD ASSY	
	R69	QRSA08J-331YN	RESISTOR	330Ω,1/10W
⚠	C2	QCZ9016-222M	CAPACITOR	0.0022μF
⚠	C3	QCZ9016-222M	CAPACITOR	0.0022μF
	C6	QFZ9022-333	MM CAPACITOR	0.033μF,250V
⚠	HD1	PU57505	FUSE CLIP, ×2	
	J5	PU60894-103	TERMINAL	
	J6	PU60894-103	TERMINAL	
	J7	PU60894-103	TERMINAL	
	CL2	PGZ01377-03	STYLE PIN	
⚠	LF002	PELN0678	LINE FILTER	
	CN1	PGZ01956-002	CONNECTOR	
	CN2	PGZ01955-102	CONNECTOR	

SWITCHING REGULATOR BOARD ASSY <61>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
⚠	PWBA	PRK10157B2	SW. REGULATOR BOARD ASSY	
⚠	IC1	FA5311P	IC	
	IC7	BA10358F	IC	
⚠	Q1	2SK1102	FE TRANSISTOR	
	Q37	2SC4081(QRS)	TRANSISTOR	
	D1	AG01	FR DIODE	
	D2	AG01	FR DIODE	
	D3	RD27ES-T1B4	ZENER DIODE	
	D4	RD5.1ES-T1B3	ZENER DIODE	
	D5	1SS133	DIODE	
	D6	RD20ES-T1B1	ZENER DIODE	
	D7	1SR153-200-T2	FR DIODE	

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	D20	FML-12S	FR DIODE	
	D24	FMB-24	BARRIER DIODE	
	D27	MA689	DIODE	
	D29	FML-12S	FR DIODE	
	D30	HZ22CP	ZENER DIODE	
	D31	FML-12S	FR DIODE	
	D33	FMB-24	BARRIER DIODE	
	D36	1SS133	DIODE	
	D37	1SS133	DIODE	
	D38	RD6.2ES-T1B3	ZENER DIODE	
	D42	11E2	DIODE	
	DA1	RBA-402	DIODE	
	R1	8D-13	POWER TH	
	R2	QRD161J-104	RESISTOR	100kΩ,1/6W
	R3	QRD161J-104	RESISTOR	100kΩ,1/6W
	R4	QRG032J-683	OMF RESISTOR	68kΩ,3W
	R5	QRG032J-683	OMF RESISTOR	68kΩ,3W
	R6	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R7	QRG01DJ-220X	OMF RESISTOR	22Ω,1W
	R8	QRD161J-221	RESISTOR	220Ω,1/6W
	R9	QRX014J-R27Z	MF RESISTOR	0.27Ω,1W
	R10	QRX014J-R27Z	MF RESISTOR	0.27Ω,1W
	R11	QRX014J-R27Z	MF RESISTOR	0.27Ω,1W
	R12	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R13	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
	R53	QRSA08J-392YN	RESISTOR	3.9kΩ,1/10W
	R76	QRD161J-471	RESISTOR	470Ω,1/6W
	R77	QRSA08J-432YN	RESISTOR	4.3kΩ,1/10W
	R78	QRSA08J-561YN	RESISTOR	560Ω,1/10W
	R83	QRV144F-9761AY	CMF RESISTOR	9.76kΩ,1/4W
	R84	QRV144F-1022AY	CMF RESISTOR	10.2kΩ,1/4W
	R85	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R101	QRSA08J-0R0Y	RESISTOR, ×4(R101-104)	0Ω,1/10W
	C5	QCZ9016-222M	CAPACITOR	0.0022μF
	C8	PGZ01963-477	E CAPACITOR	-40μF
	C9	QCZ0212-472	CAPACITOR	0.0047μF,1kV
	C11	QETC1HM-225	E CAPACITOR	2.2μF,50V
	C12	QFV11HJ-104	MM CAPACITOR	0.1μF,50V
	C13	QFLA1HJ-471Z	M CAPACITOR	470pF,50V
	C14	QFV11HJ-104	MM CAPACITOR	0.1μF,50V
	C15	QEGC1EM-336	E CAPACITOR	33μF,25V
	C16	QFV11HJ-394	MM CAPACITOR	0.39μF,50V
	C17	QCFA1HZ-472	CAPACITOR	0.0047μF,50V
	C18	QCZ0136-101Z	CAPACITOR	100pF
⚠	C20	QEGB1EM-108	E CAPACITOR	1000μF,25V
	C21	QETB1EM-108	E CAPACITOR	1000μF,25V
	C28	QEGB1AM-278	E CAPACITOR	2700μF,10V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C29	QETB1AM-228	E CAPACITOR	2200μF,10V
	C33	QEGB1EM-127	E CAPACITOR	120μF,25V
	C34	QETC1EM-227	E CAPACITOR	220μF,25V
	C39	QEGB1EM-108	E CAPACITOR	1000μF,25V
	C40	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C42	QETC1EM-477	E CAPACITOR	470μF,25V
	C43	QEGB1CM-158	E CAPACITOR	1500μF,16V
	C44	QFV41HJ-473	TF CAPACITOR	0.047μF,50V
	C45	QETB1CM-108	E CAPACITOR	1000μF,16V
	C46	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C53	QEGB1CM-687	E CAPACITOR	680μF,16V
	C54	QETB1CM-108	E CAPACITOR	1000μF,16V
	C59	QFLA1HJ-273Z	M CAPACITOR	0.027μF,50V
	C73	PU57601-475ME	OS. CAPACITOR	4.7μF
	C76	PU57601-106MC	OS. CAPACITOR	10μF
	L20	PU60944-330K	COIL	33μH
	L21	PU60944-330K	COIL	33μH
	L22	PELN0270-330KZ	COIL	33μH
	L23	PU60944-330K	COIL	33μH
	L24	PU60944-330K	COIL	33μH
	L25	PU60944-330K	COIL	33μH
	K1	PU60281-2Z	FERRATE BEADS	
	K2	PU60281-2Z	FERRATE BEADS	
	K3	PU60281-5	FERRATE BEADS	
	K4	PGZ01222-001	FERRATE BEADS	
⚠	PC1	PS2501-1	PHOTO COUPLER	
	T1	PGZ01984	SW TRANS	
	K21	PU60281-2Z	FERRATE BEADS	
	K22	PU60281-2Z	FERRATE BEADS	
	K23	PU60281-2Z	FERRATE BEADS	
	K24	PU60281-2Z	FERRATE BEADS	
	K25	PU60281-2Z	FERRATE BEADS	
	HS1	PEME0882	HEAT SINK	
	HS2	PRD31020	HEAT SINK	
	J8	PEMC0742-008	B TO B CONNECTOR	
	J9	PEMC0742-010	B TO B CONNECTOR	
	SCW1	SDSG3008Z	SCREW, (FOR Q1)	
	SCW2	DPSP3006Z	SCREW, (FOR HS2)	
	SCW3	SDSP3006Z	SCREW, × 5 (FOR DIODE)	
	J10	PEMC0742-008	B TO B CONNECTOR	

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	J11	PEMC0742-008	B TO B CONNECTOR

REGULATOR BOARD ASSEMBLY <62>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	PWBA	PRK10157-A3	REGULATOR BOARD ASSY	
	IC2	BA10358F	IC	
	IC3	BA10358F	IC	
	IC4	UPC7912HF	IC	
	IC6	BA10358F	IC	
	Q20	2SD1856	TRANSISTOR	
	Q22	2SD1856	TRANSISTOR	
	Q23	DTA114EU	TRANSISTOR	
	Q25	DTC114EU	TRANSISTOR	
	Q28	DTC143EU	TRANSISTOR	
	Q31	2SB941P	TRANSISTOR	
	Q32	2SA1515(QR)	TRANSISTOR	
⚠	Q36	2SD1856	TRANSISTOR	
	Q38	2SA1576(QRS)	TRANSISTOR	
	D21	DAP202U	DIODE	
	D25	DAP202U	DIODE	
	D26	RD5.1ES-T1B3	ZENER DIODE	
	D34	DAP202U	DIODE	
	D35	RD5.1ES-T1B3	ZENER DIODE	
⚠	D40	1SS133	DIODE	
	D41	1SS133	DIODE	
	R21	QRV144F-7321AY	CMF RESISTOR	7.32kΩ,1/4W
	R22	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R23	QRD161J-432	RESISTOR	4.3kΩ,1/6W
	R25	QRX014J-R27Z	MF RESISTOR	0.27Ω,1W
	R26	QRD161J-682	RESISTOR	6.8kΩ,1/6W
	R27	QRD161J-432	RESISTOR	4.3kΩ,1/6W
	R34	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R35	QRD161J-752	RESISTOR	7.5kΩ,1/6W
	R36	QRSA08J-472YN	RESISTOR	4.7kΩ,1/10W
	R37	QRX014J-R22Z	MF RESISTOR	0.22Ω,1W
	R38	QRD161J-102	RESISTOR	1kΩ,1/6W
	R39	QRD161J-752	RESISTOR	7.5kΩ,1/6W
	R40	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R41	QVPC625-202Z	V RESISTOR	2kΩ
	R42	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
	R43	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R44	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R48	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
	R49	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
	R54	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
⚠	R55	QRZ0077-470X	FUSIBLE RESISTOR	47Ω,1/4W

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R57	QRV144F-8451AY	CMF RESISTOR	8.45kΩ,1/4W
	R58	QRV144F-9761AY	CMF RESISTOR	9.76kΩ,1/4W
	R66	QRSA08J-272YN	RESISTOR	2.7kΩ,1/10W
	R67	QRD161J-182	RESISTOR	1.8kΩ,1/6W
	R68	QRD161J-752	RESISTOR	7.5kΩ,1/6W
	R70	QRX014J-R22Z	MF RESISTOR	0.22Ω,1W
	R71	QRD161J-102	RESISTOR	1kΩ,1/6W
	R72	QRD161J-752	RESISTOR	7.5kΩ,1/6W
	R73	QRSA08J-123YN	RESISTOR	12kΩ,1/10W
	R74	QVPC625-202Z	V RESISTOR	2kΩ
	R75	QRSA08J-222YN	RESISTOR	2.2kΩ,1/10W
⚠	R79	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
⚠	R80	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
⚠	R81	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
	R82	QRSA08J-0R0Y	RESISTOR	0Ω,1/10W
	C22	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C23	QETB1CM-108	E CAPACITOR	1000μF,16V
	C24	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C30	QCYA1HK-102	CAPACITOR	0.001μF,50V
	C31	QETC0JM-477	E CAPACITOR	470μF,6.3V
	C32	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C35	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C36	QETC1EM-475	E CAPACITOR	4.7μF,25V
	C37	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C38	QETC1EM-475	E CAPACITOR	4.7μF,25V
	C47	QETC1CM-227	E CAPACITOR	220μF,16V
	C48	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C55	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C56	QETC0JM-476	E CAPACITOR	47μF,6.3V
	C57	QETC0JM-227	E CAPACITOR	220μF,6.3V
	C58	QCFA1HZ-103	CAPACITOR	0.01μF,50V
	C60	QETC0JM-226	E CAPACITOR	22μF,6.3V
	CL1	PGZ01377-03	STYLE PIN, (SP2)	
	HS1	PRD31023	HEAT SINK	
	SCW1	SDSP3006Z	SCREW, ×6 (FOR HS1)	
	TP1	SQMX001-001Z	TEST PIN, ×2(TP1,TP2)	
	CN1	PU58250-14	CONNECTOR	
	CN2	PU56258-14	CONNECTOR	
	CN3	PU59555-107	CONNECTOR	
	CN4	PU59555-105	CONNECTOR	
	CN5	PU59555-106	CONNECTOR	
	CP1	ICP-F20	CIRCUIT PROTECTOR	

#⚠REF No. PART No. PART NAME, DESCRIPTION

LINE FILTER BOARD ASSEMBLY <64>

PWBA	PRK10157A4	LINE FILTER BOARD ASSY	
C001	QFZ9022-333	MM CAPACITOR	0.033μF,250V
C002	QFZ9022-333	MM CAPACITOR	0.033μF,250V
LF001	PELN0678	LINE FILTER	

DRUM BOARD <94>

PWB	PRK30121	DRUM BOARD

CONNECTOR BOARD ASSEMBLY <95>

PWBA	PRK30122A	CONNECTOR BOARD ASSY
CN1	YU40106-13	CONNECTOR
CN2	PU58250-14	CONNECTOR

SECTION 7
TECHNICAL INFORMATION

7.1 HOUR METER INDICATIONS

7.1.1 Outline

This model is capable of indicating the following data in the on-screen display besides running hours of the drum motor.

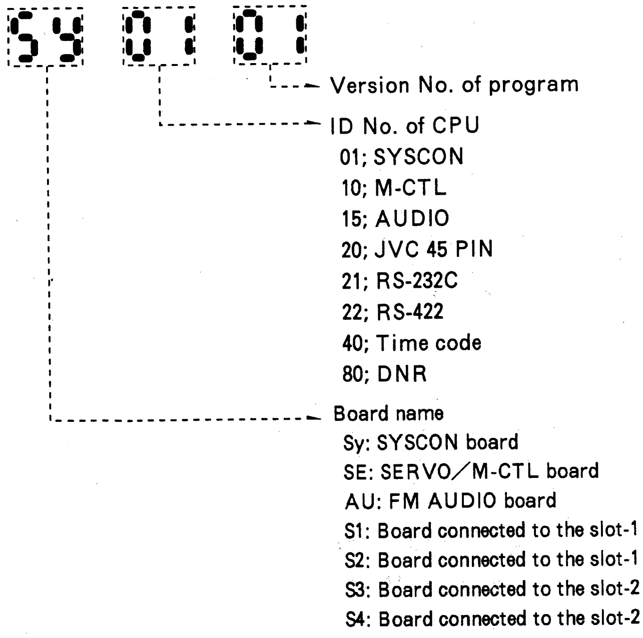
(1) Total operation (power-on) hours
(POWER HOUR METER)
(2) Running hours of capstan motor (CAP HOUR METER)
(3) Running hours of reel motor (REEL HOUR METER)
(4) Number of switching-on times (POWER ON TIMES)
(5) Number of loading times (LOADING TIMES)
(6) Number of ejection times (EJECT TIMES)
(7) Number of times of head cleaner operation
(HEAD CLEANING TIMES)
(8) Version No. of the CPU program (XXX ROM Ver.)

Those data are shown in the counter display on the front panel and the on-screen display.

7.1.2 Operation procedure

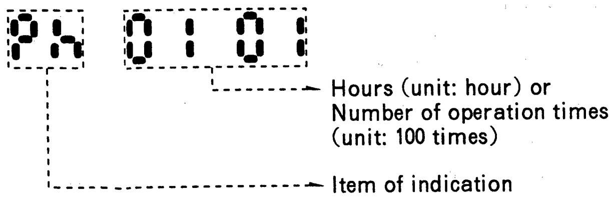
(1) Without any cassette inserted, press the EJECT and MENU buttons at the same time.
(2) The version number of the EP-ROM of the SYSCON board appears in the counter display.
(3) Every time the IN/+SHIFT or the OUT/−SHIFT button is pressed, the displayed item changes one after another as shown in the right column. Detail of each display is as follows.

<Program version display>



Sy 01 01
Version No. of program
ID No. of CPU
01; SYSCON
10; M-CTL
15; AUDIO
20; JVC 45 PIN
21; RS-232C
22; RS-422
40; Time code
80; DNR
Board name
Sy: SYSCON board
SE: SERVO/M-CTL board
AU: FM AUDIO board
S1: Board connected to the slot-1
S2: Board connected to the slot-1
S3: Board connected to the slot-2
S4: Board connected to the slot-2

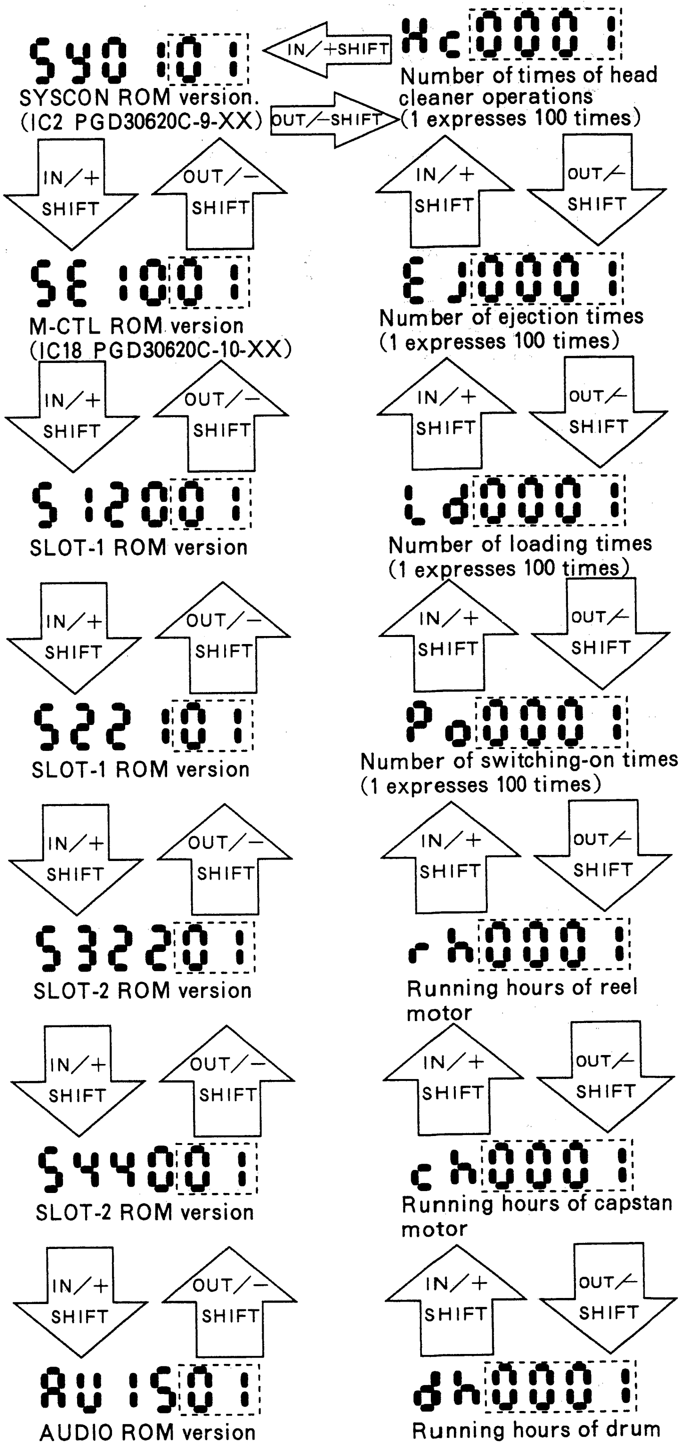
<Hour meter display>



Ph 01 01
Hours (unit: hour) or
Number of operation times
(unit: 100 times)
Item of indication

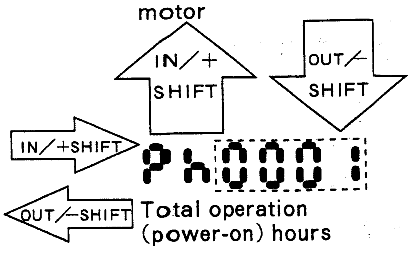
(4) To reset the display to the original indication, press the MENU button once to reset it to the MENU SETTING display or press it one more again to reset it to the TAPE COUNTER display.

<Examples of counter display>



Sy0 101
IN/+SHIFT
Hc0001
Number of times of head cleaner operations
(1 expresses 100 times)
SYSCON ROM version.
(IC2 PGD30620C-9-XX)
OUT/−SHIFT
IN/+ SHIFT
OUT/− SHIFT
SE 1001
M-CTL ROM version
(IC18 PGD30620C-10-XX)
E J0001
Number of ejection times
(1 expresses 100 times)
S 1201
SLOT-1 ROM version
Ld0001
Number of loading times
(1 expresses 100 times)
S22 101
SLOT-1 ROM version
Po0001
Number of switching-on times
(1 expresses 100 times)
S3220 1
SLOT-2 ROM version
rh0001
Running hours of reel motor
S4400 1
SLOT-2 ROM version
ch0001
Running hours of capstan motor
AU 1501
AUDIO ROM version
dh0001
Running hours of drum motor

Note:The program version number of IC9 (M37451E8-XXXFP) of the FM AUDIO board is not shown in its part number. To know the part number of IC9 from the version number appearing in the display, use the reference table collating part numbers and version numbers with each other.



IN/+ SHIFT
OUT/− SHIFT
IN/+SHIFT
Ph0001
OUT/−SHIFT
Total operation
(power-on) hours

Note : In the on-screen display, the number of operation times is indicated at a unit of one time.

7.2 SERVICE MENU

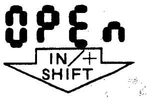
7.2.1 Outline

The service menu of this model includes the following functions.

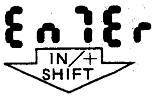
(1) To set menu switches for servicing.
(2) To register and call user setting of menu switches.
(3) To reset menu switch setting to the initial setting at factory shipment.
(4) To show the history of warnings.

7.2.2 Access procedure to service menu

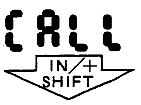
(1) Take the cassette tape out of the set and then turn off the power switch.
(2) Turn on the power switch again and press the EJECT and STOP buttons simultaneously within 2 seconds after the counter display goes on.
(3) "OPEn" appears in the counter display.
(4) Press the IN/+SHIFT button to show a desired menu.



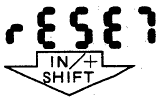
OPEN
Menu to open the service menu switch.



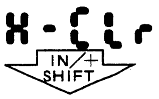
ENTER
Menu to register user setting of menu switch.



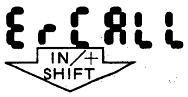
CALL
Menu to call up registered menu switch setting.



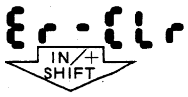
RESET
Menu to reset the menu switch to the initial setting at factory shipment.



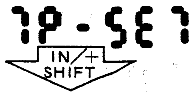
For factory use.



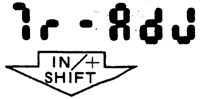
ERROR CALL
Menu to show the history of warnings.



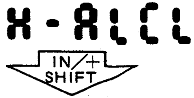
ERROR CLEAR
Menu to reset data of the warning history.



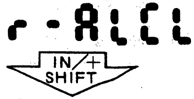
For factory use.



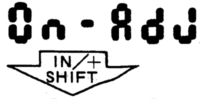
TRACKING ADJUSTMENT
Menu to adjust tracking preset.



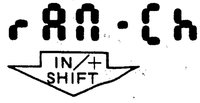
For factory use.



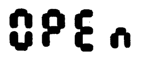
For factory use.



ON-SCREEN ADJUSTMENT
Menu for adjustment of the on-screen circuit.



For factory use.



The display returns to the OPEN menu. Continuous pressing of the IN/+SHIFT button shows the above service menues repeatedly.

7.2.3 Operation procedure

(1) Menu switch setting for service use

Besides the menu switches explained in the instructions, there are other menu switches for service use provided in this set. This subsection explains procedures to change the setting of those menu switches.

1) Access the service menu and get "OPEn" appearing in the counter display. (Refer to 7.2.2.)
2) Press the SET button on the front panel and then press the MENU button. All menu switches will be opened.
3) With the IN/+SHIFT and the OUT/−SHIFT buttons, access the menu number to be desired to change on the counter display.
4) Change the setting with the SET button.
5) To quit or cancel the service mode, press the MENU button.

(2) Registering procedure of user setting of Menu SW

1) Access the service menu and get "EnTEr" appearing in the counter display. (Refer to 7.2.2.)
2) Press the SET button on the front panel and the current menu switch setting is registered.

(3) Calling procedure of user setting of Menu SW

1) Access the service menu and get "CALL" appearing in the counter display. (Refer to 7.2.2.)
2) Press the SET button on the front panel and the menu switch setting is reset as it was registered in the above item (2) 'Registering procedure of user setting of menu switches'.

(4) Initializing procedure of Menu switch setting as it was set at factory shipment

1) Access the service menu and get "rESET" appearing in the counter display. (Refer to 7.2.2)
2) Press the SET button on the front panel and the menu switch setting is reset to the initial setting at factory shipment.

(5) Tracking preset adjustment mode

The tracking preset adjustment is necessary to obtain the optimum tracking as the tracking control knob is set at the center click position, since there is irregularity in the characteristics of variable resistors used for tracking adjustment. The tracking preset adjustment of this model is so simplified compared with previous models as just to store the output voltage with the tracking control being set at the center click position in the memory of the microprocessor.

1) Access the service menu and get "Tr-AdJ" appearing in the counter display. (Refer to 7.2.2.)
2) Set the tracking control knob at the center click position.
3) Press the SET button, and the microprocessor memorizes the output voltage of the tracking control.

(6) On-screen adjustment mode

The on-screen adjustment mode is used to adjust the oscillation frequency of the crystal used in the on-screen circuit. Previous models require to shortcircuit test points for this adjustment, however, this model is so improved that such troublesome shortcircuiting is replaced by this mode.

(7) Warning history clearning procedure

This model stores data of the last four warning modes. Use the warning history clearing menu to clear the stored data of past warnings.

1) Access the service menu and get "Er-CLr" appearing in the counter display. (Refer to 7.2.2.)
2) Press the SET button and the stored warning data is cleared.

Note : The menu switches for servicing are not shown in the on-screen display.

Menu No.	Item	Function	Counter	Explanation
106	SWITCHING POINT	Selects drum rotation phase (PB switching point)	▨ 0	6.5H
			2	2.25H (Use this setting when you want a lower switching point for closed-circuit system.)
303	WARNING ENABLE	Normally keep this menu to "0"side.	▨ 0	Warning mode is enabled.
			1	Warning mode is not enabled.
306	LONG PAUSE	Long pause parameters are selected with menu item #307~#310.	▨ 0	Long pause function is enabled.
			1	Long pause fonction is not enabled.
307	LONG PAUSE TIME	With menu item #306 set to "0" (ENABLE) ,selects the length of time before normal Pause (STOP, STILL and REC-PAUSE) changes to Long Pause.	0	Long pause starts 1 sec. after.
			1	Long pause starts 10 sec. after.
			2	Long pause starts 30 sec. after.
			3	Long pause starts 1 min. after.
			4	Long pause starts 2 min. after.
			5	Long pause starts 3 min. after.
			6	Long pause starts 4 min. after.
			▨ 7	Long pause starts 5 min. after.
308	LONG PAUSE (STILL) MODE	Selects the contents of Long Pause mode. (After the time set with menu item #307 expires in Still or Record-Pause mode,the VCR operates as specified.)	▨ 0	Standby off mode takes place.
			2	Every time the period of time set by the menu item #307 elapses, the tape is forwarded for 2 frames. (After this operation is repeated six times, the mode is shifted to the standby off mode.)
309	LONG STOP MODE	Selects the contents of Long Pause mode. (After the time set with menu item #307 expires in Stop mode, the VCR operates as specified.)	▨ 0	Standby off mode takes place.
			2	Every time the period of time set by the menu item #307 elapses, the tape is forwarded for 2 frames. (After this operation is repeated six times, the mode is shifted to the standby off mode.)
310	STAND-BY OFF MODE	Selects the status of Standby-off mode.	0	Drum rotates, pinch roller is off.
			▨ 1	Drum stops, pinch roller is off.
			2	Unloading end state.
313	PB•PB/EE SELECT	Selects output signal.	▨ 0	In the mode set by Menu No.314 : EE
			1	Always PB output mode.
314	PB/EE MODE	With menu item #313 set to "0" (PB/EE), selects the mode in which EE signal is output.	▨ 0	In STOP/FF/REW mode : EE
			1	In STOP : EE
315	LOCAL FUNCTION	Selects operation button to be accepted when REMOTE SW is set to REMOTE side.	▨ 0	STOP/EJECT
			1	STP/FF/REW/STL/PLY/EJ
			2	All buttons are accepted.
			3	All bottons are not accepted.
325	CTL COUNTER MODE	Selects the CTL counter mode.	▨ 0	±9H mode
			1	24H mode
327	CTL CLEAR AT EJECT	–	0	CTL counter is reset when cassette is ejected.
			▨ 1	CTL counter is not reset when cassette is ejected.
336	NTSC/PAL	Selects PAL/NTSC.	▨ 0	NTSC
			1	PAL
342	EP INVALID	–	0	EP mode playback is prohibited.
			▨ 1	EP mode playback is enabled.
501	CHAR. H POSITION	Adjusts on-screen VCR data display position in the horizontal direction.	▨ 0	VCR data is displayed at the rightmost position.
			1-8	Display position shifts to the left with increasing numbers.
502	CHAR. V POSITION	Adjusts on-screen VCR data display position in the vertical direction.	▨ 0	VCR data is displayed at the bottom of screen.
			1-8	Display position shifts up with increasing numbers.

▨ shows initial settings.

Table 7-2-1 Table of menu switches for service use

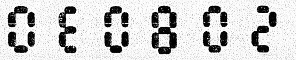
(8) Calling procedure of warning history

This model stores the following data of past warning modes that the set entered for the last four times so as to inform the warming modes in detail.

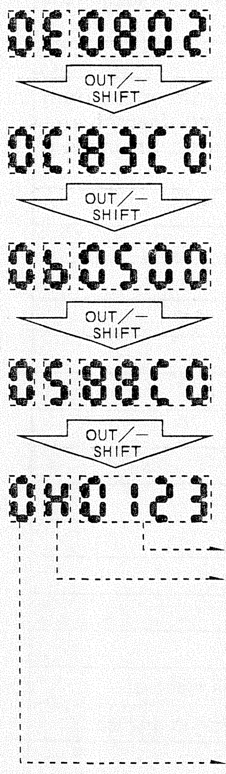
a) Warning code in three figures.
b) Operation mode of the set when the warning was effectuated.
c) Operation mode of the set preceding the mode in which the warning was effectuated.
d) Operation button that was lastly operated before the warning mode.
e) Total operation (power-on) hours indicated by the hour meter when the warning was effectuated.

The above-mentioned information on the warning can be called by the following procedure.

1) Access the service menu and get "ErCALL" appearing in the counter display. (Refer to 7.2.2)
2) Press the SET button on the front panel and such the last warning code as the following will appear in the counter display.



3) Press the OUT/-SHIFT button on the front panel repeatedly and the detailed information on the last warning mode will appear in the counter display one after another.



Warning code

Mode when the warning was effectuated.

Mode preceding the mode in which the warning was effecuated.

Lastly pressed operation button before the warning mode.

Hours when the warning was effectuated.

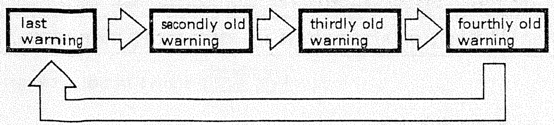
Indicates data .

Indicates kind of data.

E ;ERROR DATA
C ;CURRENT MODE
b ;BEFORE MODE
S ;SWITCH
H ;HOUR METER

Indicates the order of warning counted backwards from the last warning.

4) To access the data of older warnings, press the IN/+SHIFT button once to access the warning preceding the last one, press it again to access the thirdly old warning, and do it once more to access the fourthly old warning.



(9) Warning data in detail

a) Warning codes
Refer to the "Table of Warning Codes" (page 7-6 and after).

b) Operation mode in which the set enters the warning mode and the operation mode preceding the former.
The counter display shows mode commands that are internally used for the set.
Some mode commands contain data, which are shown in the order from MSD to LSD.

CMD		MODE	REMARK
02	−	STILL	
05	−	PLAY	
07	−	NO CASSETTE	
09	−	EJECT	
0B	−	STOP-2	UNLOAD END state
0C	−	STOP-3	PINCH:OFF, DRUM: OFF
0D	−	STOP-4	PINCH: ON,DRUM: ON
0E	−	ERROR MODE	
10	−	POWER OFF	
13	−	SKIP FWD	Leader tape skipping in the Full-loading End state.
14	−	SKIP REV	
17	−	SLOW FF	Reel Search at 33X or 17X speed, or FF/REW (pinch roller off) near the end or the beginning of tape.
18	−	SLOW REW	
19	−	FAST FF	Reel Search at 100X speed.
1A	−	FAST REW	
1B	−	SHORT FF	Leader tape skipping in the Unloading End state.
1C	−	SHORT REW	
80	**	REC	Including 1 byte data. *1
81	**	ASSM EDIT	Including 1 byte data. *2
83	**	SHUTTLE (+)	Including speed data. *3
84	**	JOG (+)	Including speed data. *3
85	**	VARIABLE (+)	Including speed data. *3
86	**	PLAY(+)	Including speed data. *4
90	**	AUDIO DUB	Including 1 byte data. *5
91	**	INSERT EDIT	Including 1 byte data. *6
93	**	SHUTTLE (−)	Including speed data. *3
94	**	JOG (−)	Including speed data. *3
95	**	VARIABLE (−)	Including speed data. *3
96	**	PLAY (−)	Including speed data. *4
B3	**	INTAKE	Including data to indicate the next mode. *7
B4	**	HALF LOAD	
B5	**	HALF UNLOAD	
B6	**	LOAD	
B7	**	UNLOAD	

For detals of data (*1 to *7), refer to the next page.

Table 7-2-2 Mode data

Data added to mode commands

*1 Detailed status of REC mode is shown by the data 0.

<Data 0>

MSD				LSD			
7	6	5	4	3	2	1	0
			REC		REC PLAY	REC PAUSE	BACK SPACE

*2 Detailed status of ASSEMBLY mode is shown by the data 0.

<Data 0>

MSD				LSD			
7	6	5	4	3	2	1	0
			ASSEM		EDIT PLAY	EDIT STILL	PRE-ROLL

*3 Tape speed is expressed by the data 0 in the following equation.

$$\text{TAPE SPEED}=10^{\frac{\text{DATA0 〔DEC〕}}{64}-2}$$

*4 Tape speed is expressed by the data 0 in the following equation.

$$\text{TAPE SPEED} =1\times(1+0.001\times\text{DATA0 〔DEC〕})$$

*5 Detailed status of AUDIO DUB mode is shown by data 0.

<Data 0>

MSD				LSD			
7	6	5	4	3	2	1	0
			AUDIO DUB				PAUSE

*6 Detailed status of INSERT mode is shown by data 0.

<Data 0>

MSD				LSD			
7	6	5	4	3	2	1	0
			INSERT		EDIT PLAY	EDIT STILL	PRE-ROLL

*7 Although the next mode is indicated by the data 0 and data 1 in this command, the counter display shows the detail of the data 0 only.

< Data 0 >

MSD				LSD			
7	6	5	4	3	2	1	0
	REW	FF	STOP	REC PLAY	REC STILL		EJECT

< Data 1 > This data is not shown in the counter display.

MSD				LSD			
7	6	5	4	3	2	1	0
REV	FWD	STILL	PLAY		SHTL REV	SHTL STILL	SHTL FWD

c) Operation button lastly pressed before the warning mode.

The data display of the lastly pressed operation button shows the key that was lastly pressed before the warning was effectuated with the key commands used internally for the set.

Some key commands contain data, which are shown in the order from MSD to LSD.

CMD		MODE	REMARK
30	00	EJECT KEY	
31	00	STOP KEY	
32	00	FF KEY	
33	00	REW KEY	
34	00	STILL KEY	
37	00	EDIT KEY	
38	00	EDIT STOP KEY	
40	00	PLAY KEY	
41	00	REC+PLAY KEY	
42	00	REC+PAUSE KEY	
43	00	A.DUB+PLAY KEY	
44	00	A.DUB+STILL KEY	
45	00	STAND-BY KEY	
50	00	POWER ON KEY	
60	00	POWER OFF KEY	
87	**	EE ON KEY	Containing data to select EE signal. *1
88	**	SHTL(+) KEY	Containing speed data. *2
89	**	JOG(+) KEY	Containing speed data. *2
8A	**	VAR SRH(+) KEY	Containing speed data. *2
8B	**	PLAY(+) KEY	Containing speed data. *3
97	**	EE OFF KEY	Containing data to select EE signal. *1
98	**	SHTL(−) KEY	Containing speed data. *2
99	**	JOG(−) KEY	Containing speed data. *2
9A	**	VAR SRH(−) KEY	Containing speed data. *2
9B	**	PLAY(−) KEY	Containing speed data. *3

Table 7-2-3 Key data

*1 In this command the data 0 indicates the signal line to be used for EE operation.

<Data 0>

MSD				LSD			
7	6	5	4	3	2	1	0
			SELECT				FULL

*2 Tape speed is expressed by the data 0 in the following equation.

$$\text{TAPE SPEED}=10^{\frac{\text{DATA0 〔DEC〕}}{64}-2}$$

*3 Tape speed is expressed by the data 0 in the following equation.

$$\text{TAPE SPEED} =1\times(1+0.001\times\text{DATA0 〔DEC〕})$$

7.3 WARNING DETECTION CIRCUIT

7.3.1 Outline

If there occurs something abnormal in operation, this set diagnose the cause by itself and stops the operation automatically.

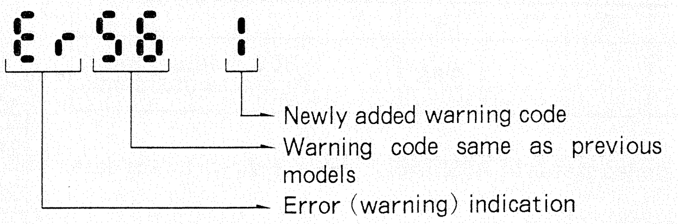
This operation is named the warning mode, which indicates the kind of the abnormal operation in the counter display on the front panel and in the Video Monitor Out signal.

Note: When the menu No. 303 'WARNING ENABLE' is set to OFF (01), the set does not enter the warning mode.

When the set enters the AUTO OFF mode, the set can be recovered from the mode only by turning off the main switch once and turning it on again.

Although such the operation as mentioned above is carried out in previous models, this model is improved in diagnosing speed with the newly added functions of the following.

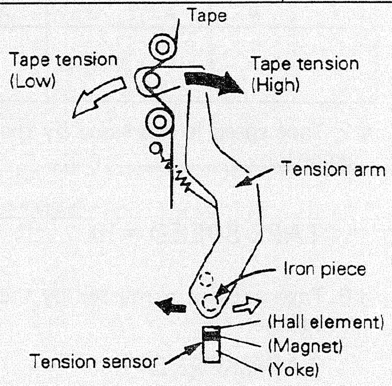
1) Warning code displayed in three figures
   Compared with the display in two figures for previous models, this set indicates more detailed data of the warning with an additional digit.

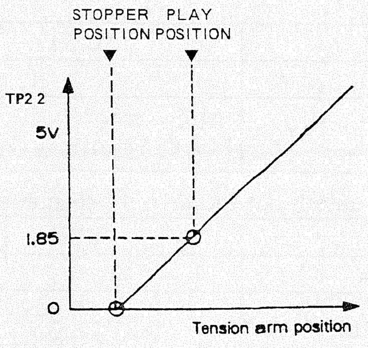

Er56 1
Newly added warning code
Warning code same as previous models
Error (warning) indication

2) Memory of warning history
   This set stores data of past warning modes in the memory. (Refer to 7.2.3(8) 'Calling procedure of warning history'.)

7.3.2 Table of warning codes

Symbol No. . indicates part on the SERVO/M-CTL board unless otherwise indicated.

<table>
<tr><th>Code No.</th><th>Sensor</th><th>Detection manner</th><th>Operation</th><th>Countermeasure</th></tr>
<tr><td colspan="5">01:Breakdown or disconnection of LED for leader tape detection</td></tr>
<tr><td>01 1</td><td>Q22</td><td>When level of pin 38 of IC21 becomes High ievel for 240 ms or longer.
Normal level of pin 38 of IC21 is 0 V.</td><td>AUTO OFF</td><td>Replace the LED.</td></tr>
<tr><td colspan="5">02:Condensation on drum</td></tr>
<tr><td>02 1</td><td>Dew sensor
(IC14pin75)
Characteristic of dew sensor
<table>
<tr><th>Relative humidity</th><th>Resistance value</th></tr>
<tr><td>75%</td><td>20kΩ and less</td></tr>
<tr><td>100%</td><td>200kΩ and more</td></tr>
</table></td><td>When level of pin 75 of IC14 is 3 V or more.
This warning mode is cancelled when level of pin 75 of IC14 becomes 2 V or less.
When level of pin 75 of IC14 is 2 V to 3 V at the moment of power on, the set enters this warning mode if the last power-off was operated as the set was in the warning 02 mode.
Normal level of pin 75 of IC14 is 2 V or less.</td><td>The drum motor automatically runs after the cassette is ejected.
As the set is released from the dewed condition, the warning mode is cancelled and the set comes back to the normal operation mode.
In the dewed condition, no cassette tape can be loaded.</td><td>If the warning mode is not cancelled, it may result from trouble of the dew sensor.</td></tr>
<tr><td colspan="5">08:Abnormal supply tension</td></tr>
<tr><td>08 1</td><td>Tension sensor
(TP22 or IC14pin72)</td><td>When level of pin 72 of IC14 is less than 0.2 V for 500 ms as the mechanism is in the loading end state (except in the standby off mode).
Normal voltage at TP22 is as follows:
In play mode : 1.85 V ±0.10V
In standby off mode: $0^{+0.1}_{-0}$ V.</td><td>AUTO OFF</td><td>Abnormal tension servo.
Maladjustment of R214, R222. (This case needs adjustment of each torque of playing, loading and reversing.)
Faulty reel motor.
Trouble in the tape transport system.</td></tr>
<tr><td></td><td></td><td colspan="3">

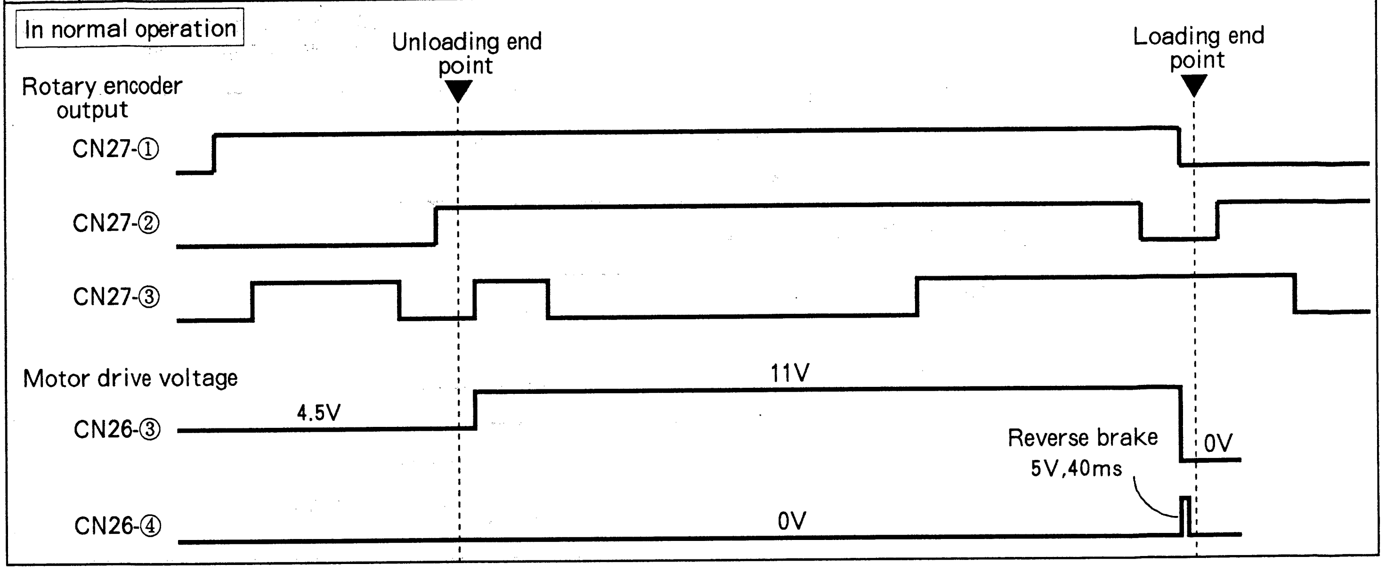

</td></tr>
</table>

Symbol No. . indicates part on the SERVO/M-CTL board unless otherwise indicated.

Code No.	Sensor	Detection manner	Operation	Countermeasure

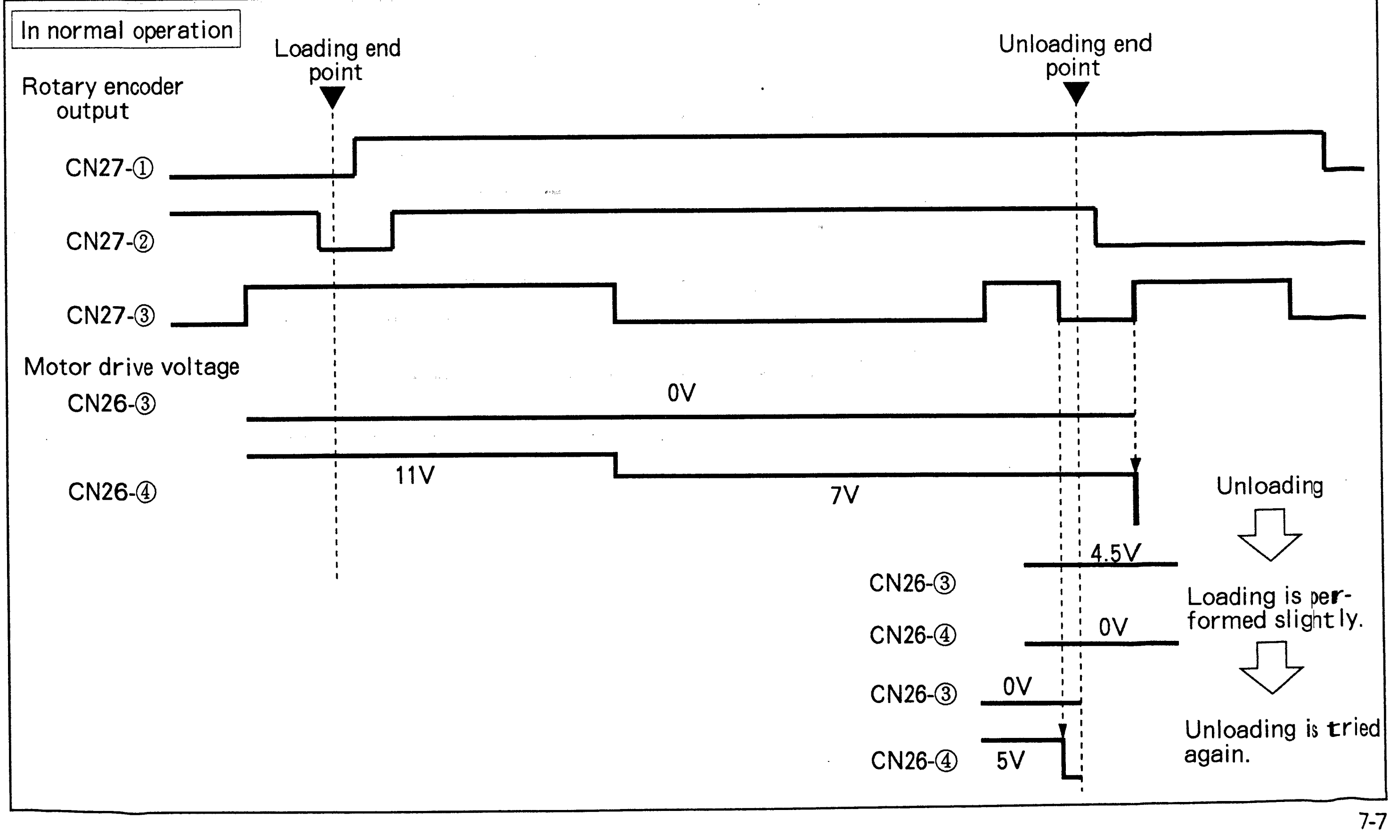
32: Loading is not carried out.

32 1	Rotary encoder (CN27- ①②③)	When loading does not finish within 8 sec after it starts.	Loading is cancelled and unloading is executed. Then, loading will be tried again. If the loading for the second time fails, too, the cassette tape is ejected.	Fault in rotary encoder. Fault in loading motor. Fault in IC33 MDA (TA8405S). Trouble in the loading mechanism. Faulty cassette tape.


In normal operation
Unloading end point
Loading end point
Rotary encoder output
CN27-①
CN27-②
CN27-③
Motor drive voltage
11V
4.5V
CN26-③
Reverse brake 5V,40ms
0V
CN26-④
0V

33: Unloading is not carried out.

33 1	Rotary encoder (CN27- ①②③)	When unloading does not finish within 8 sec after it starts.	Unloading is cancelled and loading is executed. Then, unloading will be tried again. If the unloading for the second time fails, too, the set enters the AUTO OFF warning mode.	Fault in rotary encoder. Fault in loading motor. Fault in IC33 MDA (TA8405S). Trouble in the loading mechanism. Faulty cassette tape.


In normal operation
Loading end point
Unloading end point
Rotary encoder output
CN27-①
CN27-②
CN27-③
Motor drive voltage
CN26-③
0V
CN26-④
11V
7V
Unloading
4.5V
CN26-③
Loading is performed slightly.
CN26-④
0V
CN26-③
0V
Unloading is tried again.
CN26-④
5V

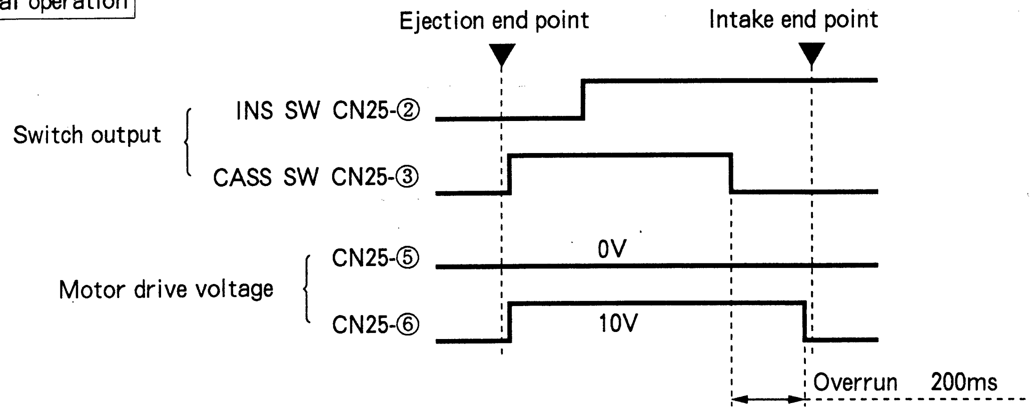
Symbol No. . indicates part on the SERVO/M-CTL board unless otherwise indicated.

Code No.	Sensor	Detection manner	Operation	Countermeasure

Intake operation is not completed. (No warning indication)

— —	Cassette switch (CN25-③) Insert switch (CN25-②)	When cassette tape intake operation does not finish within 3 sec.	Cassette tape is ejected. No warning indication is displayed.	Fault in cassette housing. Fault in IC33 MDA (TA8405S). Fault in cassette or insert switch. Faulty cassette tape. Abnormal orientation of LED for leader tape detection.

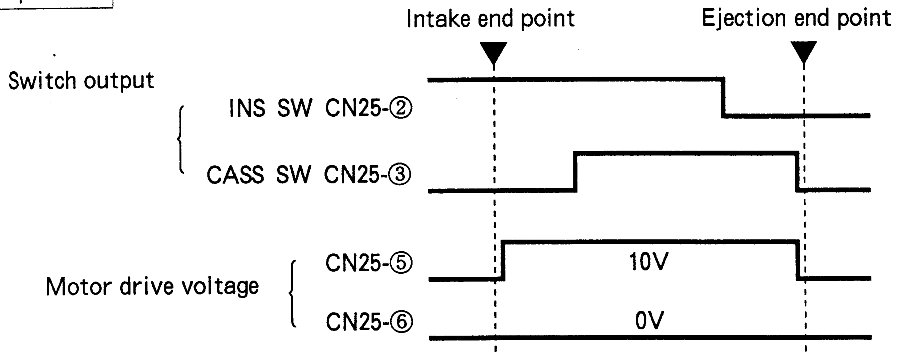
In normal operation


Ejection end point
Intake end point
Switch output
INS SW CN25-②
CASS SW CN25-③
Motor drive voltage
CN25-⑤
0V
CN25-⑥
10V
Overrun 200ms

41:Ejection is not completed.

41 1	Cassette switch (CN25-③) Insert switch (CN25-②)	When cassette ejection operation does not finish within 3 sec.	Ejection operation is once cancelled and the cassette tape is taken in again. Then, ejection operation is tried once more. If the ejection operation for the second time fails, the set enters the AUTO OFF warning mode.	Fault in cassette housing. Fault in IC33 MDA (TA8405S). Fault in cassette or insert switch. Faulty cassette tape.

In normal operation

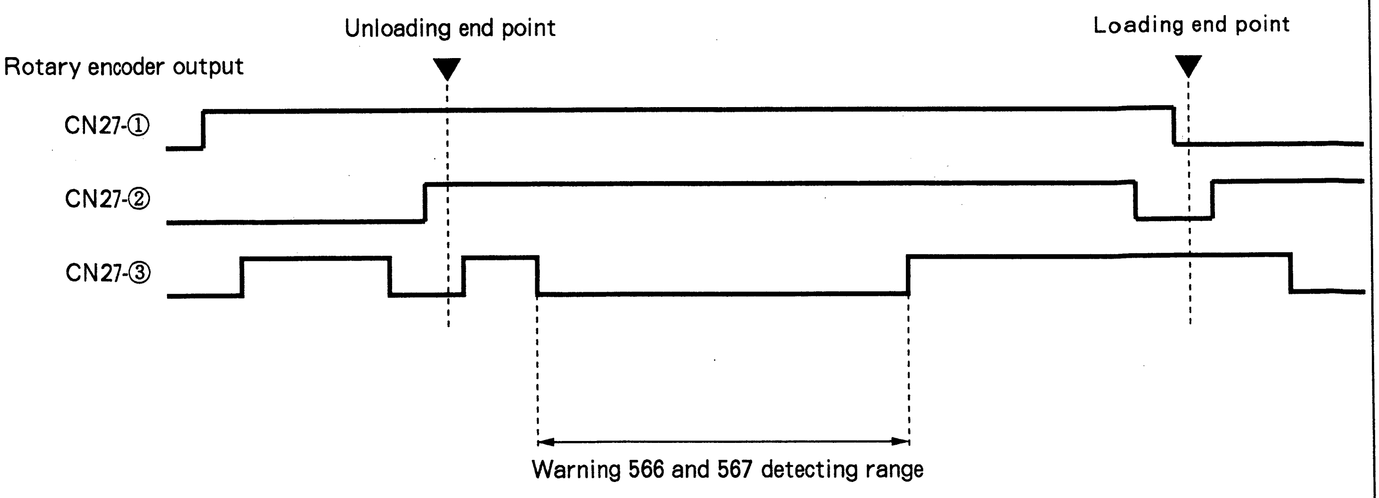

Intake end point
Ejection end point
Switch output
INS SW CN25-②
CASS SW CN25-③
Motor drive voltage
CN25-⑤
10V
CN25-⑥
0V

Symbol No. . indicates part on the SERVO/M-CTL board unless otherwise indicated.

Code No.	Sensor	Detection manner	Operation	Countermeasure

56:Tape breaking

56 1	SUP. reel FG (IC14pin63)	When reel reversely runs for 3 cm and more in tape length in the Short FF/REW or Skip FWD/REV mode.	Cassette tape is ejected.	Trouble in reel servo circuit. Faulty wiring between reel motor and SERVO/M-CTL board.
56 2	TU. reel FG (IC14pin62)			
56 3	SUP. reel FG (IC14pin63)	When there are more than 40 REEL FG pulses output for the reason that reel motor runs at a high speed exceeding the specified limit with a cassette tape being inserted. Specified speed limit is: When pinch roller is on : 11X speed x 1.1 When pinch roller is off : 100X speed x 1.1. The above limits are determined by calculation of diameter of tape winding and REEL FG pulses.	Cassette tape is ejected.	Trouble in reel servo circuit. Faulty wiring between reel motor and SERVO/M-CTL board.
56 4	TU. reel FG (IC14pin62)			
56 5	Tape beginning sensor (IC21pin37) Tape end sensor (IC21pin36)	When both of tape end and tape beginning are detected for 500 ms or longer in a mode other than loading and unloading at the same time with a cassette tape being inserted. **Each sensor output is 3.5 V or more in normal operation.**	Cassette tape is ejected.	Trouble in tape beginning sensor and tape end sensor. Abnormal orientation of LED for leader tape detection.
56 6	SUP. reel FG (IC14pin63)	When supply reel turns around 7 times or more in unloading mode. (A turning around of supply reel outputs 120 SUP REEL FG pulses.)	Cassette tape is ejected.	Trouble in reel servo circuit. Faulty wiring between reel motor and SERVO/M-CTL board.
56 7	SUP. reel FG (IC14pin63)	When supply reel turns around 5 times or more in loading mode. (A turning around of supply reel outputs 120 SUP REEL FG pulses.)	Cassette tape is ejected.	Trouble in reel servo circuit. Faulty wiring between reel motor and SERVO/M-CTL board.



Symbol No. . indicates part on the SERVO／M-CTL board unless otherwise indicated.

57:Tape end detection

Code No.	Sensor	Detection manner	Operation	Countermeasure
57 1	Tape end sensor (CN21-④)	When leader tape is not pulled into cassette within 3 sec in Short REW mode. **Tape end sensor output in normal operation is:** **with main portion of tape : 3.5 V or more,** **with leader portion of tape : 1.5 V or less.**	Cassette tape is ejected. Insert cassette tape again, and the warning display is turned out.	Trouble in reel servo circuit. Fault in tape end sensor. Abnormal orientation of LED for leader tape detection. Faulty cassette tape.
57 2	Tape end sensor (CN21-④)	When leader tape is not pulled into cassette within 3 sec in Skip REV mode.		

58:Tape beginning detection

Code No.	Sensor	Detection manner	Operation	Countermeasure
58 1	Tape beginning sensor (CN25-④)	When leader tape is not pulled into cassette within 3 sec in Short FF mode. **Tape beginning sensor output in normal operation is:** **with main portion of tape : 3.5 V or more,** **with leader portion of tape : 1.5 V or less.**	Cassette tape is ejected. Insert cassette tape again, and the warning display is turned out.	Trouble in reel servo circuit. Fault in tape begining sensor. Abnormal orientation of LED for leader tape detection. Faulty cassette tape.
58 2	Tape beginning sensor (CN25-④)	When leader tape is not pulled into cassette within 3 sec in Skip FWD mode.		

70:Drum motor is abnormal.

Code No.	Sensor	Detection manner	Operation	Countermeasure
70 1	DRUM FG (IC14pin65)	DRUM FG pulse is not output for 2 sec or more in a mode that drum motor should be running.	AUTO OFF	Fault in wiring between drum motor and SERVO／M-CTL board. Trouble in drum servo circuit. Faulty drum motor.

71:Capstan motor is abnormal.

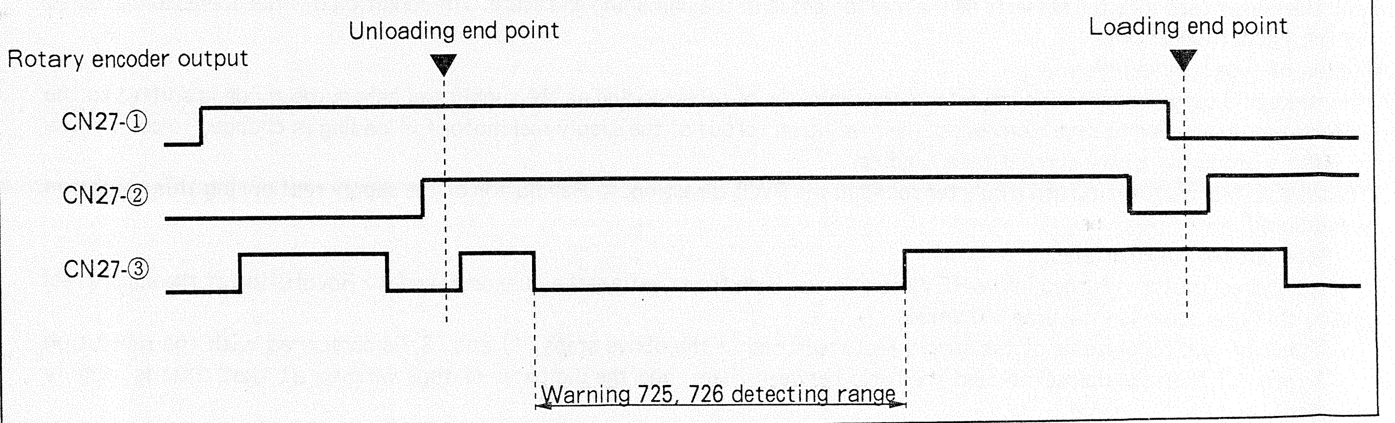
Code No.	Sensor	Detection manner	Operation	Countermeasure
71 1	CAPSTAN FG (IC14pin64)	CAPSTAN FG pulse is not output for 1 sec or more in PLAY, CAP SEARCH or REC mode.	AUTO OFF	Fault in wiring between capstan motor and SERVO／M-CTL board. Trouble in capstan servo circuit. Faulty capstan motor.

Symbol No. . indicates part on the SERVO/M-CTL board unless otherwise indicated.

Code No.	Sensor	Detection manner	Operation	Countermeasure

72:Supply reel motor is abnormal.

Code No.	Sensor	Detection manner	Operation	Countermeasure
72 1	SUP REEL FG (IC14pin63) CAPSTAN FG (IC14pin64)	**Tape slackening** When supply reel does not rotate nevertheless capstan motor is running. (When ratio of SUP REEL FG pulse to CAPSTAN FG pulse is 0 to 3072 or more in number.)	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
72 2	SUP REEL FG (IC14pin63)	**Reel locking** When no SUP REEL FG pulse is output in a specific period of time (4 sec to 12 sec) determined by diameter of tape winding.	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
72 3	SUP REEL FG (IC14pin63)	**Reel rotating reversely** When reel turns reversely for 3 cm in tape length in a mode other than Short FF/REW, Skip FWD/REV. (Tape travel distance to be converted into period is determined by calculation of diameter of tape winding and number of REEL FG pulses.)	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
72 4	SUP REEL FG (IC14pin63)	**Reel overrunning** When reel motor runs at a high speed exceeding the specific limit (110X speed) without cassette being inserted and more than 40 SUP REEL FG pulses are output a second.	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
72 5	SUP REEL FG (IC14pin63)	**Abnormal reel rotation in unloading mode** When supply reel turns only half around or less in unloading mode. (120 SUP REEL FG pulses are output a turning around of supply reel.)	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
72 6	SUP REEL FG (IC14pin63)	**Abnormal reel rotation in loading mode** When supply reel turns only half around or less in loading mode. (120 SUP REEL FG pulses are output a turning around of supply reel.)	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.



Symbol No. . indicates part on the SERVO/M-CTL board unless otherwise indicated.

73:Take-up reel motor is abnormal

Code No.	Sensor	Detection manner	Operation	Countermeasure
73 1	CAPSTAN FG (IC14pin64) TU REEL FG (IC14pin62)	**Tape slackening** When take-up reel does not rotate nevertheless capstan motor is running. (When ratio of TU REEL FG pulse to CAPSTAN FG pulse is 0 to 3072 or more in number.)	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
73 2	TU REEL FG (IC14pin62)	**Reel locking** When no TU REEL FG pulse is output in a specific period of time (4 sec to 12 sec) determined by diameter of tape winding.	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
73 3	TU REEL FG (IC14pin62)	**Reel rotating reversely** When reel turns reversely for 3 cm in tape length in a mode other than Short FF/REW, Skip FWD/REV.	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
73 4	TU REEL FG (IC14pin62)	**Reel overrunning** When reel motor runs at a high speed exceeding the specific limit (110X speed) without cassette being inserted and more than 40 TU REEL FG pulses are output a second.	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor.
73 5	TU REEL FG (IC14pin62)	**No detection of tape winding diameter** When take-up reel does not turn a quarter round within 3 sec in the mode to detect tape winding diameter just after intake of cassette tape.	AUTO OFF	Trouble in reel servo circuit. Fault in wiring between reel motor and SERVO/M-CTL board. Faulty reel motor. Trouble in mechanism.

Explanation of technical terms

1.Skip FWD:
As the tape beginning is detected in the REW and Search REV modes, the tape is automatically fast forwarded (at 2X speed) to pull the leader tape into the cassette. The condition of this operation is called the Skip FWD mode.

2.Skip REV:
As the tape end is detected in the FF, Search FWD and Play modes, the tape is automatically rewound (at 2X speed) to pull the leader tape into the cassette. The condition of this operation is called the Skip REV mode.

3.Short FF:
When the tape beginning is detected just after intake of a cassette tape, the mechanism automatically fast forwards the tape (at 5X speed) to pull the leader tape into the cassette as the mechanism is in the unloading end state. The condition of this operation is called the Short FF mode.

4.Short REW:
When the tape end is detected just after intake of a cassette tape, the mechanism automatically rewinds the tape (at 5X speed) to pull the leader tape into the cassette as the mechanism is in the unloading end state. The condition of this operation is called the Short REW mode.

5.Detection of tape winding diamter:
With intake of a cassette tape, this set detects the diameter of tape winding on the supply reel before the mode is shifted to the loading mode. According to detection result, the revolution torque of the supply reel motor for loading is changed to control the tape tension properply to the current tape winding.

(1) The take-up reel motor is turned a quarter round in the FWD direction. ⇒ Revolution of the supply reel during this operation is measured in number.

(2) The tape is taken in the slack.

(3) The supply reel motor is turned in the REV direction to turn the take-up reel a quarter round. ⇒ Revolution of the supply reel during this operation is measured in number.

(4) The higher of two revolutions of the supply reel measured in the above steps (1) and (3) is compared with the revolution (1/4 turn) of the take-up reel to find the ratio between them, and the diameter of tape winding at that time is roughly detected.

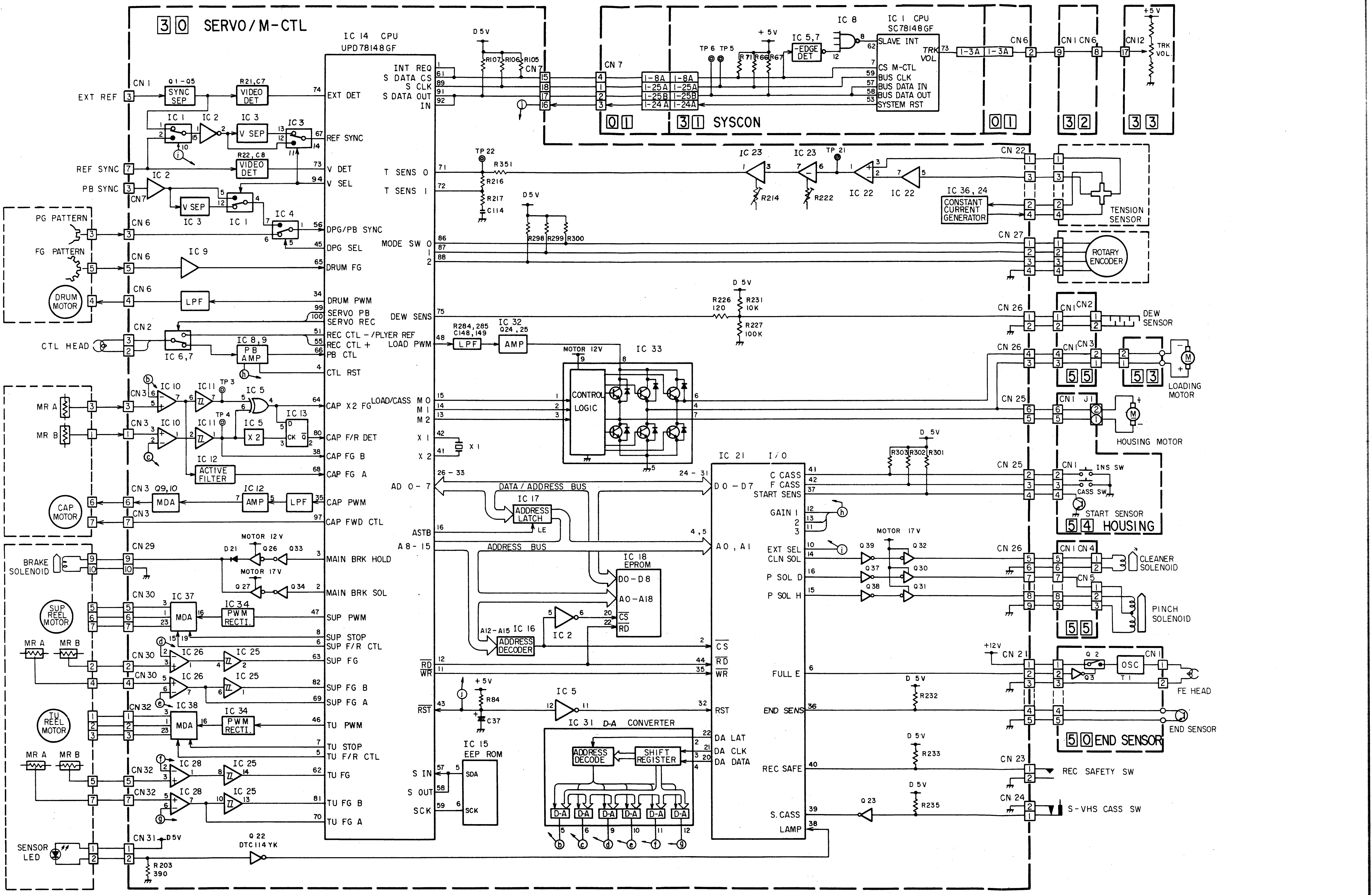

30 SERVO/M-CTL
IC 14 CPU
UPD78148GF
EXT REF
CN 1
Q1-Q5
SYNC SEP
R21, C7
VIDEO DET
EXT DET
IC 1
IC 2
IC 3
V SEP
REF SYNC
R22, C8
V DET
V SEL
PB SYNC
CN7
IC 4
DPG/PB SYNC
DPG SEL
PG PATTERN
FG PATTERN
CN 6
IC 9
DRUM FG
DRUM MOTOR
LPF
DRUM PWM
SERVO PB
SERVO REC
CN 2
CTL HEAD
IC 6, 7
IC 8, 9
PB AMP
REC CTL -/PLYER REF
REC CTL +
PB CTL
CTL RST
MR A
MR B
CN 3
IC 10
IC 11
TP 3
TP 4
IC 5
X 2
IC 13
CAP X2 FG
CAP F/R DET
CAP FG B
IC 12
ACTIVE FILTER
CAP FG A
Q9, 10
MDA
AMP
CAP PWM
CAP MOTOR
CAP FWD CTL
CN 29
BRAKE SOLENOID
MOTOR 12V
D 21
Q 26
Q 33
MAIN BRK HOLD
MOTOR 17V
Q 27
Q 34
MAIN BRK SOL
CN 30
IC 37
IC 34
PWM RECTI.
SUP PWM
SUP STOP
SUP F/R CTL
SUP REEL MOTOR
IC 26
IC 25
SUP FG
SUP FG B
SUP FG A
CN 32
IC 38
TU PWM
TU STOP
TU F/R CTL
TU REEL MOTOR
IC 28
TU FG
TU FG B
TU FG A
SENSOR LED
CN 31
D5V
Q 22
DTC114YK
R 203
390
INT REQ
S DATA CS
S CLK
S DATA OUT
IN
D 5V
R107
R106
R105
CN 7
CN 7
1-8A
1-25A
1-25B
1-24A
TP 6
TP 5
+5V
R71
R66
R67
IC 5, 7
-EDGE DET
IC 8
IC 1 CPU
SC78148GF
SLAVE INT
TRK VOL
CS M-CTL
BUS CLK
BUS DATA IN
BUS DATA OUT
SYSTEM RST
1-3A
CN 6
01
31 SYSCON
01
CN 1 CN 6
32
CN 12
+5 V
TRK VOL.
33
T SENS 0
T SENS 1
TP 22
R351
R216
R217
C114
IC 23
R214
R222
TP 21
IC 22
CN 22
IC 36, 24
CONSTANT CURRENT GENERATOR
TENSION SENSOR
MODE SW 0
1
2
R298
R299
R300
CN 27
ROTARY ENCODER
D 5V
R226
120
R231
10K
R227
100K
DEW SENS
CN 26
CN 1 CN 2
DEW SENSOR
R284, 285
C148, 149
IC 32
Q24, 25
LOAD PWM
MOTOR 12V
IC 33
CONTROL LOGIC
CN 1 CN 3
55
53
LOADING MOTOR
LOAD/CASS M 0
M 1
M 2
CN 25
CN 1 J 1
HOUSING MOTOR
X 1
X 2
R303
R302
R301
IC 21 I/O
C CASS
F CASS
START SENS
CN 1
INS SW
CASS SW
START SENSOR
54 HOUSING
AD 0-7
DATA / ADDRESS BUS
IC 17
ADDRESS LATCH
LE
D0-D7
ASTB
A8-15
ADDRESS BUS
A0, A1
IC 18
EPROM
D0-D8
A0-A18
CS
RD
IC 2
A12-A15
IC 16
ADDRESS DECODER
GAIN 1
2
3
EXT SEL
CLN SOL
P SOL D
P SOL H
Q 39
Q 32
Q 37
Q 30
Q 38
Q 31
MOTOR 17V
CN 1 CN 4
CLEANER SOLENOID
CN 5
PINCH SOLENOID
55
RD
WR
CS
RD
WR
+12V
CN 21
Q 2
Q3
OSC
T 1
FE HEAD
FULL E
D 5V
R232
+5V
R84
C37
RST
IC 5
RST
END SENS
IC 31 D-A CONVERTER
ADDRESS DECODE
SHIFT REGISTER
D-A
DA LAT
DA CLK
DA DATA
50 END SENSOR
END SENSOR
R233
REC SAFE
CN 23
REC SAFETY SW
R235
Q 23
S.CASS
LAMP
CN 24
S-VHS CASS SW
IC 15
EEP ROM
SDA
SCK
S IN
S OUT
SCK

Fig. 7-3-1 M-CTL circuit block diagram

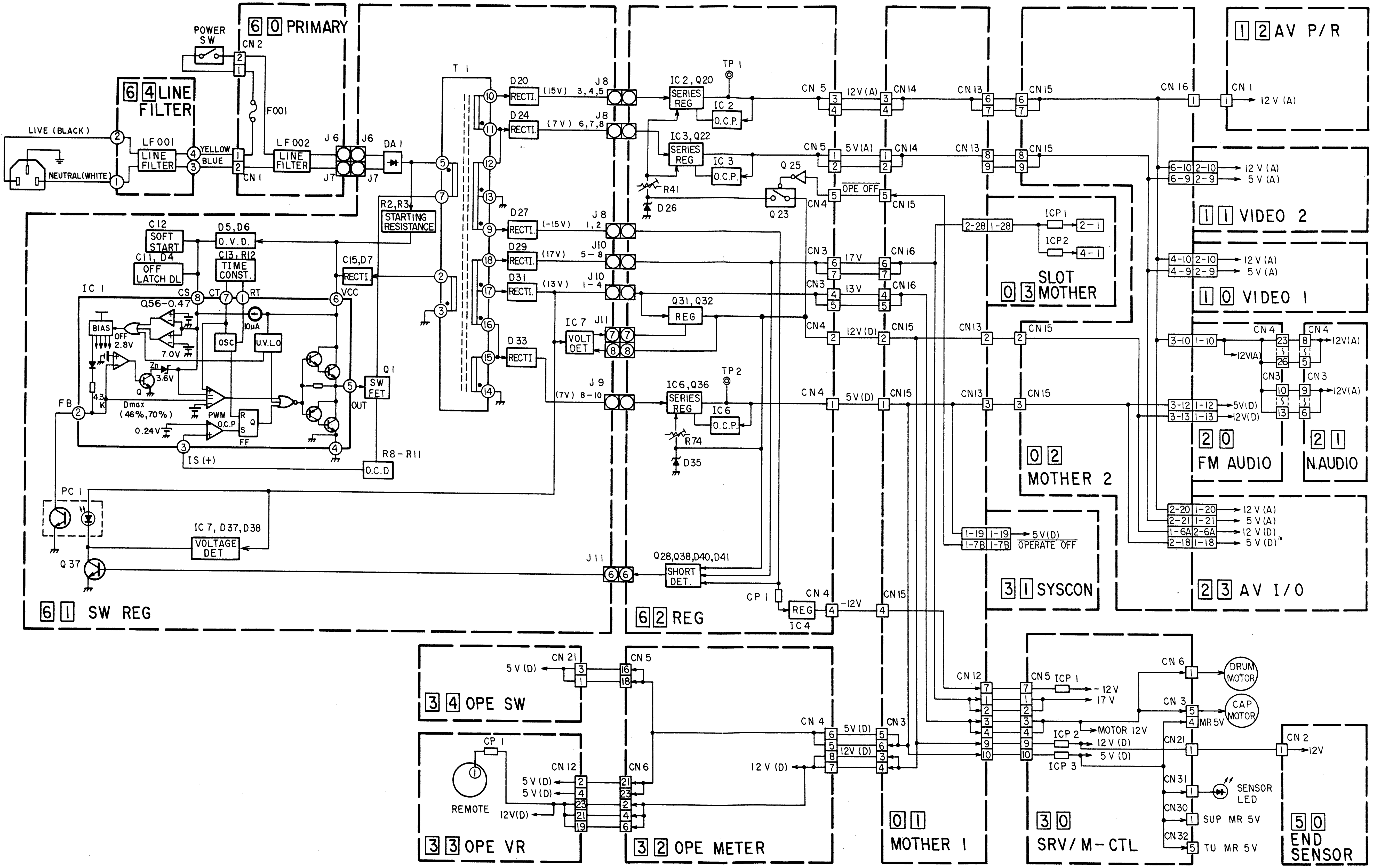

64 LINE FILTER
LIVE (BLACK)
NEUTRAL (WHITE)
LF001
LINE FILTER
YELLOW
BLUE
POWER SW
60 PRIMARY
CN2
F001
CN1
LF002
LINE FILTER
J6
J7
DA1
R2,R3
STARTING RESISTANCE
T1
D20 RECTI. (15V)
D24 RECTI. (7V)
D27 RECTI. (-15V)
D29 RECTI. (17V)
D31 RECTI. (13V)
D33 RECTI
J8 3,4,5
J8 6,7,8
J8 1,2
J10 5–8
J10 1–4
J9 (7V) 8–10
J11
IC7 VOLT DET
IC1
C12 SOFT START
D5,D6 O.V.D.
C11,D4 OFF LATCH DL
C13,R12 TIME CONST.
C15,D7 RECTI.
CS CT RT VCC
Q56–0.47
BIAS
OFF 2.8V
7.0V
3.6V
10μA
OSC
U.V.L.O
Dmax (46%,70%)
PWM
O.C.P
R S Q FF
0.24V
IS (+)
FB
OUT
Q1 SW FET
R8–R11 O.C.D
PC1
IC7, D37, D38 VOLTAGE DET
Q37
61 SW REG
IC2, Q20 SERIES REG
IC2 O.C.P.
TP1
IC3, Q22 SERIES REG
IC3 O.C.P.
Q25
Q23
R41
D26
Q31, Q32 REG
IC6, Q36 SERIES REG
IC6 O.C.P.
TP2
R74
D35
Q28, Q38, D40, D41 SHORT DET.
CP1 REG IC4
62 REG
CN5 12V (A)
CN5 5V (A)
OPE OFF
CN3 17V
CN3 13V
CN4 12V (D)
CN4 5V (D)
CN4 -12V
CN14 CN15 CN16 CN13
12 AV P/R
CN1 12V (A)
12V (A) 5V (A)
11 VIDEO 2
10 VIDEO 1
03 SLOT MOTHER
ICP1 ICP2
02 MOTHER 2
20 FM AUDIO
21 N.AUDIO
12V(A) 5V(D) 12V(D)
23 AV I/O
12V (A) 5V (A) 12V (D) 5V (D)
31 SYSCON
5V (D) OPERATE OFF
01 MOTHER 1
CN12
30 SRV/M-CTL
CN5 ICP1 -12V 17V
ICP2 MOTOR 12V 12V (D)
ICP3 5V (D)
CN6 DRUM MOTOR
CN3 CAP MOTOR MR5V
CN21 12V
CN31 SENSOR LED
CN30 SUP MR 5V
CN32 TU MR 5V
50 END SENSOR
CN2
34 OPE SW
CN21 5V (D)
33 OPE VR
CP1 REMOTE
CN12 5V (D) 5V (D) 12V (D)
32 OPE METER
CN5 CN6 CN4 CN3
5V (D) 12V (D)

Fig. 7-4-1 Block diagram of Power supply circuit

7-14

7.4 POWER SUPPLY CIRCUIT

7.4.1 Operation of switching circuit

Switching power is controlled by IC1 (FA5311P). In detail, as IC1 turns on the switching MOS FET Q1, current flows into the primary coil of the transistor T1. At that time, current does not flow to the secondary coil of T1 since voltage at the secondary coil is applied to the rectifier circuit (D20, D24, D29, D31, D33) in the reverse direction (D27 is supplied with current).
Next, IC1 turns off Q1 and the primary coil resultantly generates counter electromotive force, then current flows to the rectifier circuit of the secondary side to maintain the same ampere return as Q1 is on.

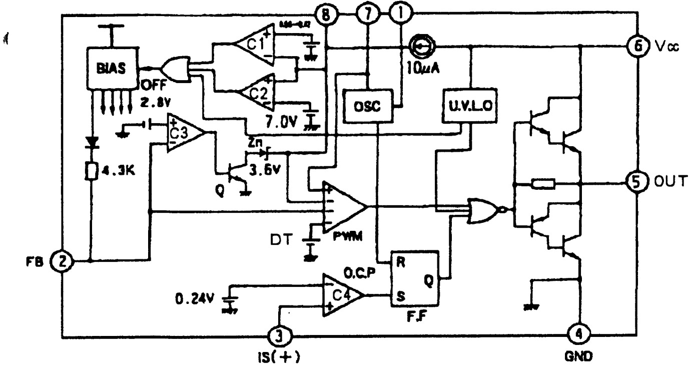


Fig.7-4-1 FA5311P Block diagram

7.4.2 IC1 FA5311P

(1) Oscillation frequency

$$f\,[\mathrm{kHz}] = \frac{10}{4 \times R_T\,[\mathrm{k\Omega}] \times C_T\,[\mathrm{pF}]} \fallingdotseq 65\,[\mathrm{kHz}]$$

(2) PWM comparator

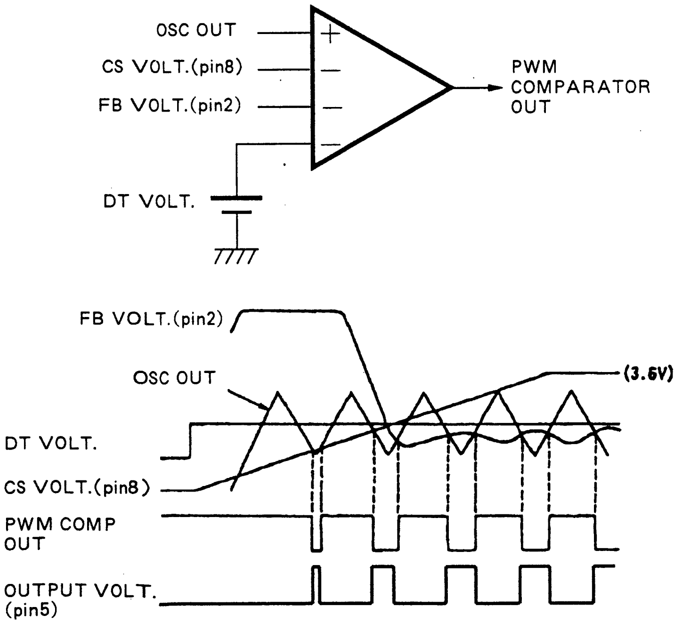


Fig.7-4-2 PWM Comparator

The PWM comparator compares the lowest voltage among CS terminal voltage, FB terminal voltage and DT voltage with the oscillator output.
DT voltage for regulating the maximum duty cycle is set to a voltage with which the maximum duty ratio is set at 70 %.

(3) Soft start

When the power is supplied to the set, the constant-current regulated power (10 μA) supply circuit inside IC1 starts charging to C12 that is externally attached to the CS terminal. Therefore, CS terminal voltage gradually goes up, and the output pulse width is accordingly widened to actuate the set with soft start.

(4) Power cutoff function in case of overload

When output voltage drops down for the reason of overload and shortcircuit, etc., FB terminal voltage goes up. If FB terminal voltage exceeds 2.8 V, output of the comparator C3 becomes low and the zener diode is unclamped in the IC. As a result, C12 to activate soft start is charged again and CS terminal voltage goes up, too. If this voltage exceeds 7 V, output of the internal comparator C2 becomes high and the bias circuit is turned off. Therefore, IC1 enters the off-latch mode and cuts off the output.
The above condition is canceled when the supply voltage (Vcc) is regulated under 8.7 V.

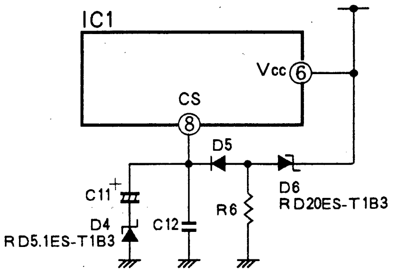


Fig. 7-4-3 External circuit of CS terminal

D4 and C11 that are externally attached to the CS terminal compose a circuit to delay the time to enter the IC into the off-latch mode.
When CS terminal voltage goes up nearly to 5 V, D4 is turned on and C11 is charged, therefore, CS terminal voltage gradually goes up. This operation avoids undesirable action of the power cutoff function such as in momentary overload resulting from turning on of the solenoid.

(5) Over-voltage interrupting function

When Vcc of IC1 exceeds 20 V, CS terminal voltage goes up by the function of the zener diode D6. If this voltage exceeds 7V, the power supply cutoff function is activated as well as the case of overload.

(6) Malfunction prevention circuit against low supply voltage (U.L.V.O.)

To prevent malfunction caused by low supply voltage, IC1 internally employs the malfunction prevention circuit against low supply voltage. When the supply voltage is raised from 0V, IC1 starts operation with 16 V of Vcc, on the other hand, when the supply voltage is dropped down, it is activated to cut off output with 8.7 V of Vcc.
When this circuit is activated once, turn down the level of the CS terminal to reset the circuit.

(7) Over-current protector circuit

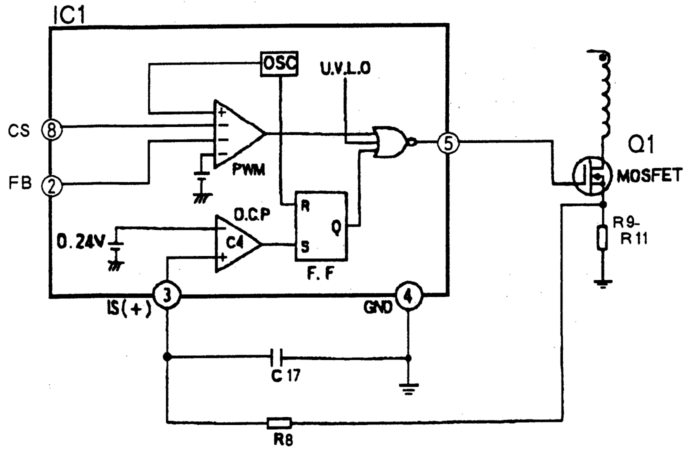


Fig.7-4-4 Over current protector circuit

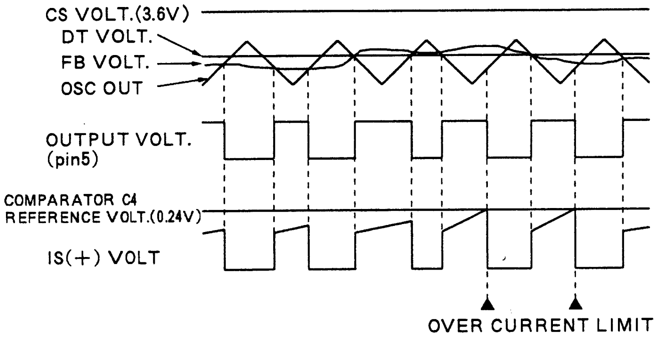


Fig.7-4-5 Over current protector timing chart

The over-current protector circuit is a pulse-by-pulse type circuit which detects peak level of drain current of Q1, the switch MOS FET, at every pulse output.

The circuit consisting of R9 through R11 converts drain current of Q1 into voltage signal, which is supplied to the IS terminal of IC1. If this voltage exceeds the reference voltage of the comparator C4 inside IC1, C4 outputs high level signal to set the flip-flop circuit. Accordingly, IC1 cut off the output to interrupt the over-current.

The flip-flop circuit again starts operation to be reset in the next cycle of OSC output.

7.5 AUTOMATIC ADJUSTMENT FUNCTIONS

7.5.1 Outline

This model reduces adjustment items in number because adjustments of the audio and servo systems are partially automatized.
Adjustment items automatized in this model are shown below.

Servo system
① Adjustment of REEL FG duty ratio
② Adjustment of CAP FG duty ratio
③ Adjustment of stop servo (CAP FG gain adjustment)
④ Adjustment of PB switching point

Audio system
① Adjustment of normal audio PB level
② Adjustment of normal audio PB frequency response
③ Adjustment of Hi-Fi audio PB level
④ Adjustment of normal audio REC level
⑤ Adjustment of normal audio REC frequency response
⑥ Adjustment of EE level

7.5.2 Automatic adjustments for servo system

(1) Operation to start automatic adjustments

FG duty ratio, stop servo adjustment

① Set the adjustment mode to "04".
(a) Turn off the power switch.
(b) Turn on the power switch, and press the COUNTER RESET, FF and REW buttons simultaneously within 2 sec after the counter display is on.
(c) Press the MENU (UP) button or the SET (DOWN) button continually until "04" appears in the counter display.
② Press the IN/+SHIFT or OUT/-SHIFT button.
③ Automatic adjustment starts. Then the mode of the set changes as follows.
(a) Reel motor rotates.
(SUP/TU REEL FG duty ratio automatic adjustment mode)
(b) Capstan motor rotates.
(CAP FG duty ratio automatic adjustment mode)
(c) Step slow mode
(Stop servo automatic adjustment mode)
④ When the above automatic adjustments are completed, "04 End" appears in the counter display.

PB switching point adjustment

① Set the adjustment mode to "0F".
② Play back the MHP alignment tape.
③ Align the tracking correctly.
④ Press the IN/+SHIFT or OUT/-SHIFT button.
⑤ Automatic adjustment starts. When the automatic adjustment is completed, "0F End" appears in the counter display.

(2) FG duty ratio automatic adjustment circuit

The purpose of FG duty ratio adjustment is to shape feeble output (sine wave) of the MR element installed for detecting rotation speed and rotating direction of each motor to be a rectangular waveform of 50 % duty ratio.
Accordingly, irregularity in the characteristics of MR elements is electrically removed. Therefore, the FG duty ratio adjustment must be performed after either of the capstan motor and reel motor is replaced.
Actually, there are six FG duty ratio adjustment circuits provided in this set since each motor has two built-in MR elements (A, B).
The following explains about the automatic adjustment circuit for CAPSTAN FG A pulse by way of example.

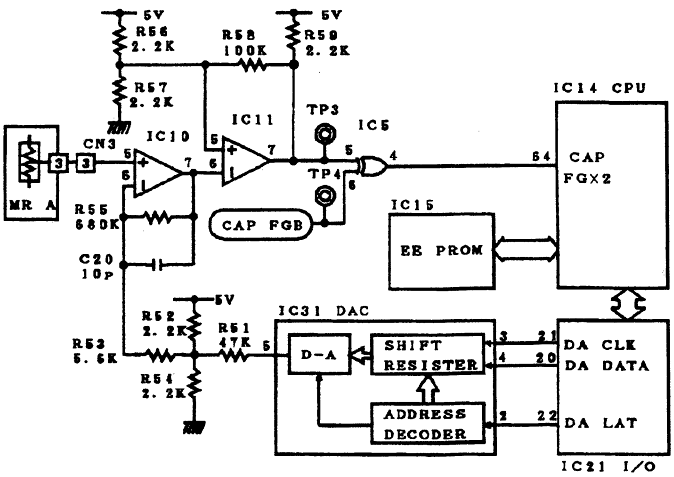
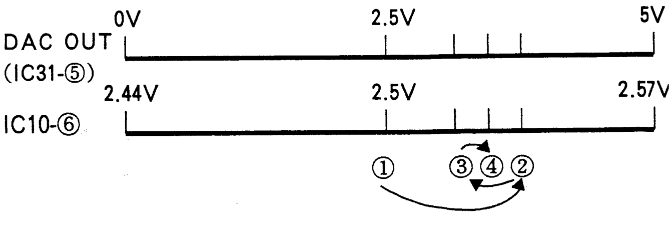


Fig. 7-5-1 FG duty ratio automatic adjustment circuit

Simply explaining the operation, the CPU of IC14 transforms DC voltage output from the D-A converter while measuring the CAPSTAN FG duty ratio. When the duty ratio becomes 50 %, the CPU writes the data in the EEPROM of IC15.

Detailed operation of the CPU IC14 is as follows.
① The CPU starts the capstan motor.
② It regulates the D-A converter output for CAP FG B pulse to 0 V. As a result, there is no CAP FG B output at TP4 and the CPU (pin 64, IC14) is supplied only with CAP FG A pulse.
③ The D-A converter (pin 5, IC31) outputs 2.5 V.
④ The duty ratio at that time is measured. (average of three measurement results)
⑤ If the duty ratio is 40 to 60 %, the CPU commences motor speed control and measures duty ratio again. (average of 768 measurement results)
⑥ According to the lastly measured duty ratio, the CPU decides the voltage to be output from the D-A converter. In detail, the CPU changes the voltage so as to set the duty ratio to 50 % as shown in the figure below.



① Fixed to 2.5 V
② Intermediate voltage between ① and the max. voltage
③ Intermediate voltage between ① and ②
④ Intermediate voltage between ③ and ②

Fig. 7-5-2 Change in output voltage of D-A converter

⑦ The CPU writes the 8th D-A converter output data in the EEPROM IC15.
(If 50 % duty ratio is obtained before the 8th measurement, measurement is suspended and the last data is written in the EEPROM.)

(3) Stop servo automatic adjustment

The stop servo circuit functions to fix the stop point of the capstan motor electrically, and it starts operation as the tape speed is slowed down nearly to 1／10X speed.

Motor drive voltage generated by the CPU during stop servo operation has such a waveform as shown in Fig. 7-5-3, and it is yielded by folding back the CAP FG A pulse at 2.5 V.

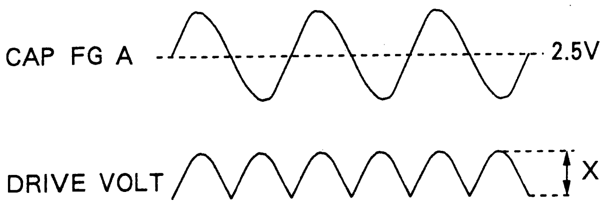


Fig. 7-5-3 Waveform of capstan motor drive voltage

Compared with previous models that needs gain adjustment to make the level X (in the above figure) constant since the level of CAP FG A depends on motor's peculiarity, this model automatically adjusts the gain by the function employed in the CPU.

The CPU first measures input level of FG pulse (at pin 68 of IC14) to make the drive voltage constant in stop servo operation. For this level measurement, the motor is required to run at a 1／100X speed approximately for yielding CAP FG pulse without distortion. However, this is a theoretical requirement and it is impossible in practical operation. Therefore, this model utilizes the step slow mode for FG level measurement and measures FG level just before the tape running is stopped. According to the mean FG level (average of 24 measurement results), the CPU calculates a constant to output drive voltage at a specific level and writes it in the EEPROM.

(4) PB switching point automatic adjustment

PB switching point adjustment is necessary for correct change of DRUM FF polarity that is used as information of video head position.

Since DRUM FF signal is obtained by delaying DRUM PG signal, the PB switching point adjustment changes the delay time so that the polarity of DRUM FF changes 6.5 H before V. sync as the MHP alignment tape is played back. This model automatizes this adjustment by the CPU.

① The CPU IC14 inputs DRUM PG, PB V. SYNC and PB H. SYNC signals through one input port (pin 56) by time-division method as well as done in the BR-S822.

② The CPU changes delay time of DRUM PG to yield DRUM FF and calculates data so as to obtain 6.5 H as a period from DRUM FF to PB V. sync. (The CPU changes delay time from the large amount of DRUM FF's delay to prevent PB V. sync from dropping out.)

③ The CPU repeats data measurement six times to obtain a mean value of four measurement results excluding the largest and smallest ones, and writes it in the EEPROM.

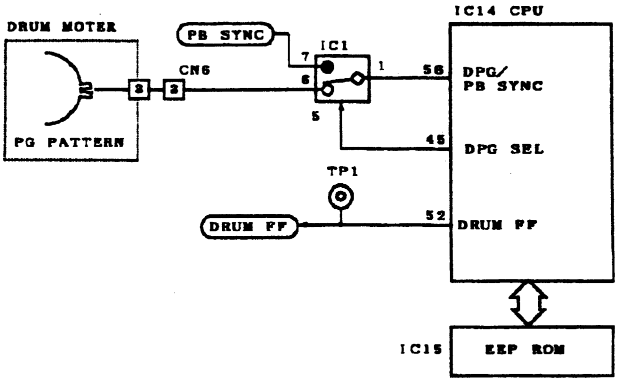

IC14 CPU
DRUM MOTER
PB SYNC
IC1
7
CN6
6
1
56
DPG/
PB SYNC
2
2
5
PG PATTERN
45
DPG SEL
TP1
52
DRUM FF
DRUM FF
IC15
EEP ROM

Fig. 7-5-5 PB switching point automatic adjustment circuit (SERVO／M-CTL board)

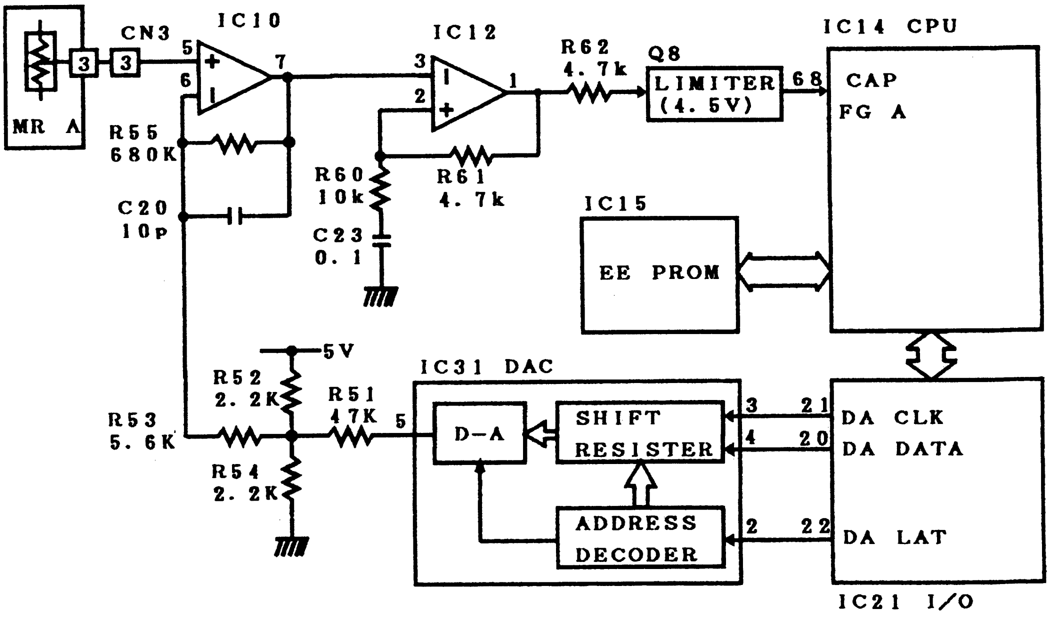

CN3
IC10
IC12
IC14 CPU
3
3
5
7
3
1
R62
4.7k
Q8
LIMITER
(4.5V)
68
CAP
FG A
6
2
MR A
R55
680K
R60
10k
R61
4.7k
IC15
C20
10p
C23
0.1
EE PROM
5V
IC31 DAC
R52
2.2K
R51
47K
5
D-A
SHIFT
RESISTER
3
21
DA CLK
R53
5.6K
4
20
DA DATA
R54
2.2K
ADDRESS
DECODER
2
22
DA LAT
IC21 I/O

Fig. 7-5-4 Stop servo automatic adjustment circuit (SERVO／M-CTL board)

7.5.3 Automatic adjustment functions for audio system

(1) Table of audio system adjustment modes

There are two kinds of adjustment modes (automatic adjustment and manual adjustment) provided for the audio system, and either of adjustment modes is usable.

	Adjustment mode No.	Adjustment item
Manual adjustment	11	EE level adjustment
	12	PB level adjustment
	13	PB frequency response adjustment
	14	REC level adjustment
	15	REC frequency response adjustment
	16	Initialization of adjustment value
Automatic adjustment	17	Overall automatic adjustment (for factory use)
	18	Normal audio PB level adjustment
	19	Normal audio PB frequency response adjustment
	1A	Hi-Fi audio PB level adjustment
	1B	Normal audio REC level adjustment
	1C	Normal audio REC frequency response adjustment
	1D	Hi-Fi audio deviation adjustment
	1E	REC mode automatic adjustment

Table 7-5-1 Table of audio system adjustment modes

(2) Operation procedure

① Turn off the power switch.
② Turn on the power switch again and press the COUNTER RESET, FF and REW buttons simultaneously within 2 sec after the counter display is on.
③ Press the MENU (UP) or SET (DOWN) button continually until the desired adjustment No. appears in the counter display.

[Manual adjustment]
Manual adjustment procedure is the same as for previous models, namely, input required signal through the LINE IN terminal and connect a measuring instrument to the LINE OUT terminal.

④ Select a channel desired for adjustment with the AUDIO MONIOR switch.
CH1: for adjustment of CH1 only
CH2: for adjustment of CH2 only
MIX: for adjustment of both channels (BR-S800 only)
⑤ Select normal audio or Hi-Fi audio with the AUDIO MONITOR switch.
⑥ Switching between S-VHS and VHS modes depends on the type of cassette tape inserted.
⑦ Manual adjustment is effectuated by pressing the COUNTER RESET button.
⑧ Use the REC LEVEL VRs (TRACKING VR for BR-S500) for adjustment.
⑨ Adjustment value is written in the EEPROM by pressing the AUTO MODE switch.

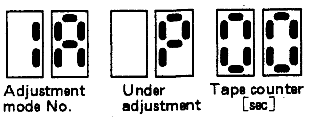
[Automatic adjustment]
Automatic adjustment needs neither connection of measuring instrument nor change of menu switch setting. (Actually, NR and Limiter circuits are off, and menu switch setting is accordingly unchanged.)

Note 1: Set the TRACKING VR to the center position.
Note 2: Proceed in the order of the adjustment mode numbers except No. 17.
Note 3: Do not use the adjustment mode No. 17 since this is provided for factory use only.

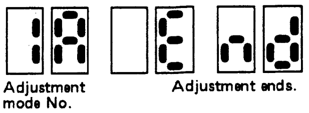
④ Pressing the COUNTER RESET button effectuate automatic adjustment mode.
⑤ When adjustment is completed, "End" appears in the counter display and the cassette tape is ejected.

In automatic adjustment the following indications appear in the counter display.

During adjustment

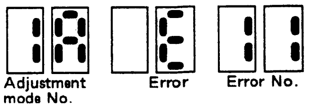


When adjustment ends



If adjustment error occurs, the following indications appear in the counter display.

When adjustment error occurs



Error No.	Detail of error
E11	Error in normal audio CH1 PB level adjustment
E12	Error in normal audio CH2 PB level adjustment
E13	Error in Hi-Fi audio L-ch PB level adjustment
E14	Error in Hi-Fi audio R-ch PB level adjustment
E15	Error in normal audio CH1 REC level adjustment
E16	Error in normal audio CH2 REC level adjustment
E17	Error in Hi-Fi audio L-ch deviation adjustment
E18	Error in Hi-Fi audio R-ch deviation adjustment
E19	Error in normal audio CH1 PB frequency response adjustment
E1A	Error in normal audio CH2 PB frequency response adjustment
E1B	Error in normal audio CH1 REC frequency response adjustment
E1C	Error in normal audio CH2 REC frequency response adjustment
E1D	Misinsertion of cassette tape

Table 7-5-2 Table of error numbers

(3) Initialization of adjustment value

The adjustment mode No. 16 is provided to preset the theoretical design values in the EEPROM.
If the EEPROM IC10 on the FM AUDIO board is replaced, the set is enabled to record and play back without performing respective adjustments. For actual use, however, make sure to adjust respective items to obtain better sound since the preset values are theoretical to the last.

① Take the cassette tape out of the set and then turn off the power switch.
② Turn on the power switch again, and press the COUNTER RESET, FF and REW buttons simultaneously within 2 sec after the counter display is on.
③ Press the MENU (UP) or SET (DOWN) button continually until the adjustment No. 16 appears in the counter display.
④ After pressing the COUNTER RESET button, press the AUTO MODE button to write the preset values in the EEPROM.

(4) Automatic adjustment mode

In the automatic adjustment modes (No. 17 through No. 1E) respective adjustments shown in Table 7-5-3 are performed automatically under control of the CPU of IC9 on the FM AUDIO board.

For carrying out the automatic adjustments, this model employs VCAs (Voltage Controlled Amplifier) as adjustment VRs, therefore, signal level is varied as the CPU controls output voltage of the D-A converter.
On the other hand, DC voltage generated by rectifying LINE OUT signal is supplied to the A-D input port (pin 58) of the CPU to enable it to measure output signal level.

(a) PB level adjustment

With playback of the 1 kHz reference signal of the alignment tape, the VCA for PB level adjustment is controlled so that the LINE OUT signal meets the specifications in the level.

(b) EE level adjustment

The CPU supplies the 1 kHz signal having the reference level from the PWM output terminal (pin 78) to the audio circuit. The automatic adjustment controls the VCA for EE level adjustment so that the LINE OUT signal meets the specifications in the level.
The VCA for normal audio EE level adjustment generally serves as the REC level adjustment VR on the front panel.

Adjustment item		Adjustment mode No.								Signal	REF. SIG.	SIG. CTL1	SIG. CTL2	GAIN CTL	Level control terminal
		No. 17	No. 18	No. 19	No. 1A	No. 1B	No. 1C	No. 1D	No. 1E		IC9 pin40	IC9 pin39	IC9 pin38	IC9 pin16	
Pilot signal search		◎								—	H	L	H	L	—
Normal audio CH1 PB level (1kHz)		◎	◎							Playback of MBA alignment tape	H	L	H	L	IC7pin8 (N. AUD PWB)
Normal audio CH2 PB level (1kHz)		◎	◎							Playback of MBA alignment tape	H	H	L	L	IC8pin8 (N. AUD PWB)
Normal audio CH1 PB frquency response (400Hz ⇒10kHz)		◎		◎						Playback of MH-6 alignment tape	H	L	H	H	IC7pin10 (N. AUD PWB)
Normal audio CH2 PB frquency response (400Hz ⇒10kHz)		◎		◎						Playback of MH-6 alignment tape	H	H	L	H	IC8pin10 (N. AUD PWB)
Hi-Fi audio L-ch PB level (1kHz)		◎			◎					Playback of MH-F6/MBAF-3 alignment tape	H	L	L	L	IC5pin8 (FMAUD PWB)
Hi-Fi audio R-ch PB level (1kHz)		◎			◎					Playback of MH-F6/MBAF-3 alignment tape	H	H	H	L	IC5pin10 (FMAUDPWB)
Normal audio CH1 EE level		◎				◎	◎		◎	PWM 24 kHz carrier, 1kHz modulated wave	H	L	H	L	IC9pin8 (N. AUD PWB)
Normal audio CH2 EE level		◎				◎	◎		◎	PWM 24 kHz carrier, 1kHz modulated wave	H	H	L	L	IC10pin8 (N. AUD PWB)
Normal audio REC level	REC mode	◎				◎			◎	PWM 24 kHz carrier, 1kHz modulated wave	H	L	H	L	IC9/IC10pin10 (N. AUD PWB)
	CH1 adj. (PB mode)	◎				◎			◎	Play back self-recorded signal.	H	L	H	L	—
	CH2 adj. (PB mode))	◎				◎			◎	Play back self-recorded signal.	H	H	L	L	—
Normal audio REC frequency response	REC mode	◎					◎		◎	8 kHz pulse	H	L	H	H	Q201/Q202-B (N. AUD PWB)
	CH1 adj. (PB mode)	◎					◎		◎	Play back self-recorded signal.	H	L	H	H	—
	CH2 adj. (PB mode))	◎					◎		◎	Play back self-recorded signal.	H	H	L	H	—
Hi-Fi audio deviation	REC mode	◎						◎	◎	PWM 24 kHz carrier, 1kHz modulated wave	H	L	L	L	IC2pin2/pin62 (FMAUDPWB)
	CH1 adj. (PB mode)	◎						◎	◎	Play back self-recorded signal.	H	L	L	L	—
	CH2 adj. (PB mode))	◎						◎	◎	Play back self-recorded signal.	H	H	H	L	—
Hi-Fi audio L-ch EE level		◎						◎	◎	PWM 24 kHz carrier, 1kHz modulated wave	H	L	L	L	IC5pin8 (FMAUD PWB)
Hi-Fi audio R-ch EE level		◎						◎	◎	PWM 24 kHz carrier, 1kHz modulated wave	H	H	H	L	IC5pin10 (FMAUD PWB)

Table 7-5-3 Function table of automatic adjustment modes

As shown in Fig. 7-5-6, the CPU outputs modulated-wave signal that 1 kHz signal is modulated in pulse width with 24 kHz carrier. This signal is converted into sine wave by an external LPF and then supplied to the audio circuit.

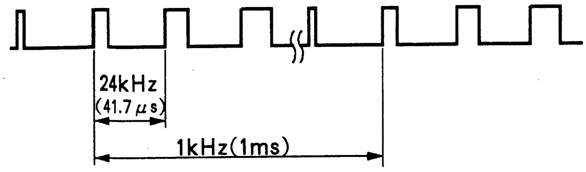

24kHz
(41.7 μs)
1kHz(1ms)

Fig. 7-5-6 Modulated-wave 1 kHz signal

(c) REC level adjustment

This set has no need of repeated operations of recording and playback for REC level adjustment as done for previous models, but requires recording and playback just once.

① The set enters in the REC mode.
② The CPU output 1 kHz signal of reference level from the PWM output terminal.
③ Controlling the VCA for REC level adjustment, the CPU raises signal level to be recorded on the tape by 0.5 dB every 2 seconds in 15 steps (±3.5 dB to the theoretical value). At that time, the CPU utilizes the value indicated by the tape counter for changing the REC level.

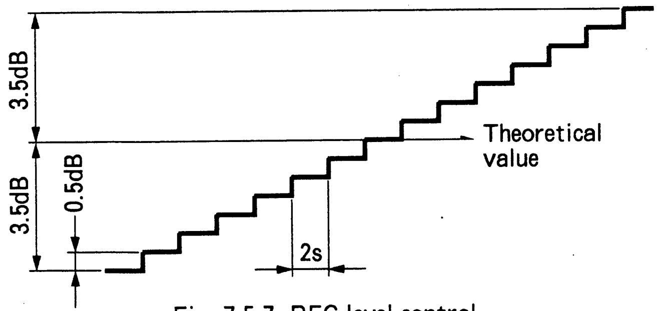


Fig. 7-5-7 REC level control

④ The CPU finalizes the REC level according to the value of the tape counter as the playback signal level meets the specifications.

(d) Normal audio PB frequency response adjustment

As the alignment tape (MH-6) on which 400 Hz and 10 kHz signals are recorded at the level of -20 dB is played back, the CPU adjusts the level of the 10 kHz signal so that it becomes +1.8 dB to that of the 400 Hz signal.

① The CPU searches the 400 Hz signal segment in the Search mode. (For detecting the frequency of a PB signal, the CPU inputs the PB signal through pin 2 (EV2).)
② The PB level of the 400 Hz signal is stored in the memory.
③ The 10 kHz signal segment is searched in the Search mode.
④ The CPU adjusts the VCA of the adding equalizer so that the PB level of the 10 kHz signal becomes +1.8 dB to the PB level of the 400 Hz signal.

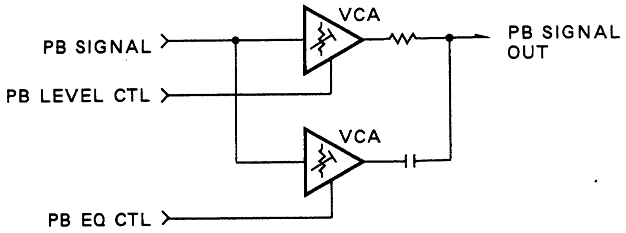

VCA
PB SIGNAL
PB SIGNAL OUT
PB LEVEL CTL
VCA
PB EQ CTL

Fig. 7-5-8 Adding equalizer circuit

(e) Normal audio REC frequency response adjustment

The 8 kHz, -20 dB signal is recorded and played back to adjust its PB level so as to meet the specifications (-20 dB to the reference level).

① The CPU enters the set in the REC mode.
② The CPU outputs the 8 kHz, -0 dB signal from the PWM output terminal.
③ The CPU changes the signal level to -20 dB with the external 20 dB attenuator.
④ Controlling the VCA for bias level adjustment, the CPU decreases the REC bias level by 0.5 dB every 2 seconds in 13 steps (±3.0 dB to the theoretical value).
At that time, the CPU utilizes the value indicated by the tape counter for changing the bias level.
⑤ The CPU finalizes the bias level according to the value of the tape counter as the playback signal level meets the specifications.

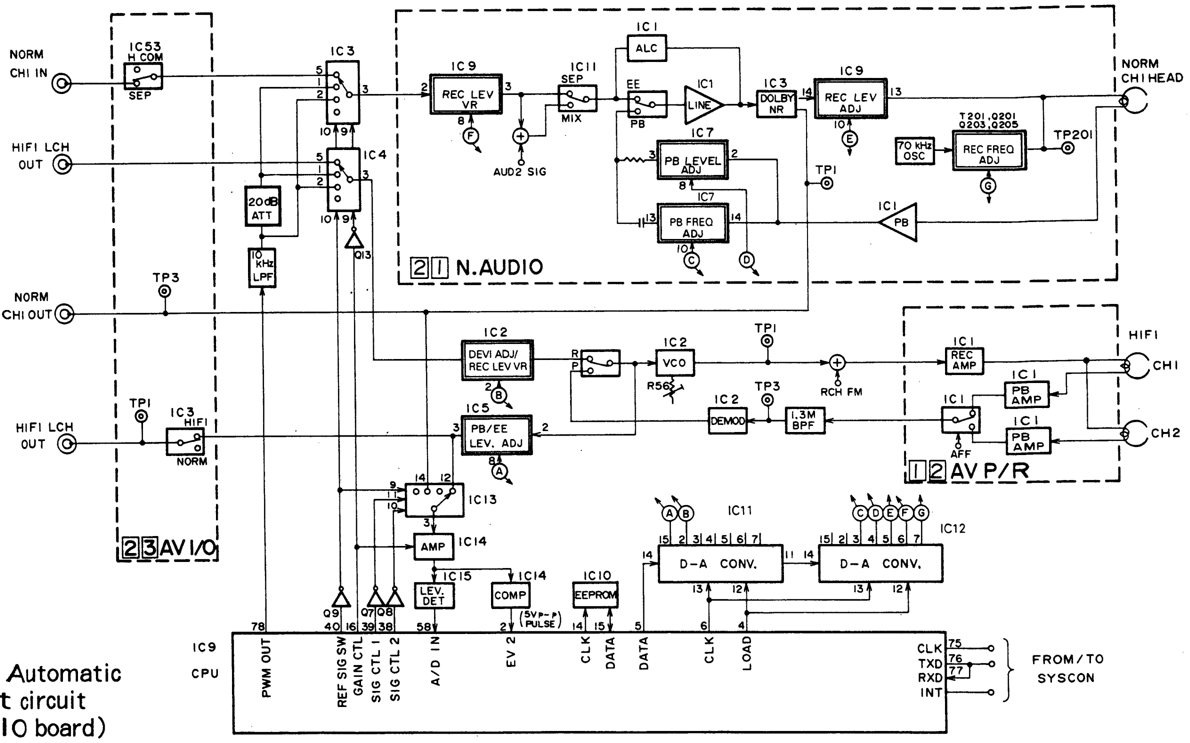

NORM CHI IN
IC53 H COM
SEP
HIFI LCH OUT
NORM CHI OUT
TP3
HIFI LCH OUT
TP1
IC3 HIFI
NORM
23 AV I/O
IC3
IC4
20dB ATT
10 KHz LPF
Q13
IC9 REC LEV VR
IC11 SEP
MIX
AUD2 SIG
IC1 ALC
EE
PB
IC1 LINE
IC3 DOLBY NR
IC9 REC LEV ADJ
IC7 PB LEVEL ADJ
IC7 PB FREQ ADJ
TP1
70 kHz OSC
T201,Q201 Q203,Q205
REC FREQ ADJ
TP201
IC1 PB
21 N.AUDIO
NORM CHI HEAD
IC2 DEVI ADJ/ REC LEV VR
IC2 VCO
R56
TP1
TP3
IC2 DEMOD
1.3M BPF
RCH FM
IC5 PB/EE LEV. ADJ
IC13
IC14 AMP
IC15 LEV. DET
IC14 COMP
IC10 EEPROM
(5Vp-p) PULSE
Q9
Q7 Q8
IC1 REC AMP
IC1 PB AMP
IC1 PB AMP
AFF
HIFI
CH1
CH2
12 AV P/R
IC11
IC12
D-A CONV.
D-A CONV.
A B C D E F G
IC9 CPU
PWM OUT
REF SIG SW
GAIN CTL
SIG CTL 1
SIG CTL 2
A/D IN
EV 2
CLK
DATA
DATA
CLK
LOAD
CLK
TXD
RXD
INT
FROM/TO SYSCON

Fig. 7-5-9 Automatic adjustment circuit (FM AUDIO board)

No.	Adjustment mode	Adjustment part	Specifications	Operation mode	Remark
00 [00]	–	–	–	–	
01 [01]	–	–	–	–	
02 [02]	–	–	–	–	
03 [03]	Slow tracking preset	[TRACKING VR]	No noise	+1/30X speed	[IN/+SHIFT]: to start adjustment [AUTO MODE]: to end adjustment
04 [04]	FG duty ratio/Stop servo	Automatic	–	Without cassette inserted	Refer to page 7-17.
05 [05]	–	–	–	–	
06 [06]	–	–	–	–	
07 [07]	Reversing torque	[IN/+SHIFT] [OUT/–SHIFT]	176g-cm	−1×	
08 [08]	–	–	–	–	
09 [09]	–	–	–	–	
0A [0A]	–	–	–	–	
0B [0b]	Loading torque	[IN/+SHIFT] [OUT/–SHIFT]	30g-cm	PLAY	Supply reel motor is controlled by loading torque.
0C [0C]	Play back tension	[IN/+SHIFT] [OUT/–SHIFT]	BR-S800:58g-cm BR-S500:55g-cm	RECorPLAY	
0D [0d]	–	–	–	–	
0E [0E]	–	–	–	–	
0F [0F]	Switching point	Automatic	–	PB of MHP alignment tape	
10 [10]	EP tracking preset	[TRACKING VR]	PB FM: Max.	PB of MHP-L alignment tape	[IN/+SHIFT]: to start adjustment [AUTO MODE]: to end adjustment
11 [11]	Audio EE level	BR-S800:[REC LEV VR] BR-S500:[TRC VR]	−6dBs	EE	Adjustment order: Normal audio: [12], [13], [11], [15] Hi-Fi audio: [12], [14], [11] after carrier frequency adjustment
12 [12]	Audio PB level	BR-S800:[REC LEV VR] BR-S500:[TRC VR]	−6dBs	PB of MBA/MH-F6 alignment tape	
13 [13]	Normal audio PB frequency response	BR-S800:[REC LEV VR] BR-S500:[TRC VR]	10 kHz : +1.8dB higher than reference (400 Hz) level	PB of MH-6 alignment tape	
14 [14]	Audio REC level	BR-S800:[REC LEV VR] BR-S500:[TRC VR]	Same level as EE level	REC/PLAY	REC system should be adjusted both in the VHS and S-VHS modes.
15 [15]	Normal audio REC frequency response	BR-S800:[REC LEV VR] BR-S500:[TRC VR]	10 kHz : Same level as reference (400 Hz) level	REC/PLAY	
16 [16]	Audio EEPROM preset mode	–	–	–	
17 [17]	Overall automatic adjustment of audio system	Automatic	–	–	For factory use
18 [18]	Normal audio PB level	Automatic	–	PB of MBA alignment tape	
19 [19]	Normal audio PB frequency response	Automatic	–	PB of MH-6 alignment tape	
1A [1A]	Hi-Fi audio PB level	Automatic	–	PB of MH-F6 alignment tape	
1B [1b]	Normal audio REC level	Automatic	–	–	Should be adjusted both in the VHS and S-VHS modes.
1C [1C]	Normal audio REC frequency response	Automatic	–	–	Should be adjusted both in the VHS and S-VHS modes.
1D [1d]	Hi-Fi audio EE level	Automatic	–	–	
1E [1E]	Audio REC system automatic adjustment	Automatic	–	–	Should be adjusted both in the VHS and S-VHS modes.

Table 7-5-4 Table of adjustment modes

7.6 CTL TIME CODE

7.6.1 Outline

The CTL time code is made up by the CTL pulse coding system. The BR-S800 and BR-S500 are equipped with the CTL time code generator (in BR-S800 only) and the CTL time code reader circuit as the standard.

The features of the CTL time code are as follows.

(1) It is utilizable with a smaller-scale circuit compared with LTC and VITC systems,
(2) inexpensive compared with LTC and VITC system,
(3) capable of high-precision editing (editing accuracy: within ±1 frame) compared with CTL editing.

7.6.2 Construction of CTL time code

The construction of the CTL time code is shown in Fig. 7-6-1. As shown in the figure CTL time code is a data that is intermittently output every 2 seconds, however, it is usable as a data of frame unit by interpolating the interval between two CTL time codes.
Although there are two modes of the drop frame mode and the non-drop frame mode provided in the CTL time code standard as shown in the figure, this set comforms to the non-drop frame mode.

7.6.3 Reading of CTL time code

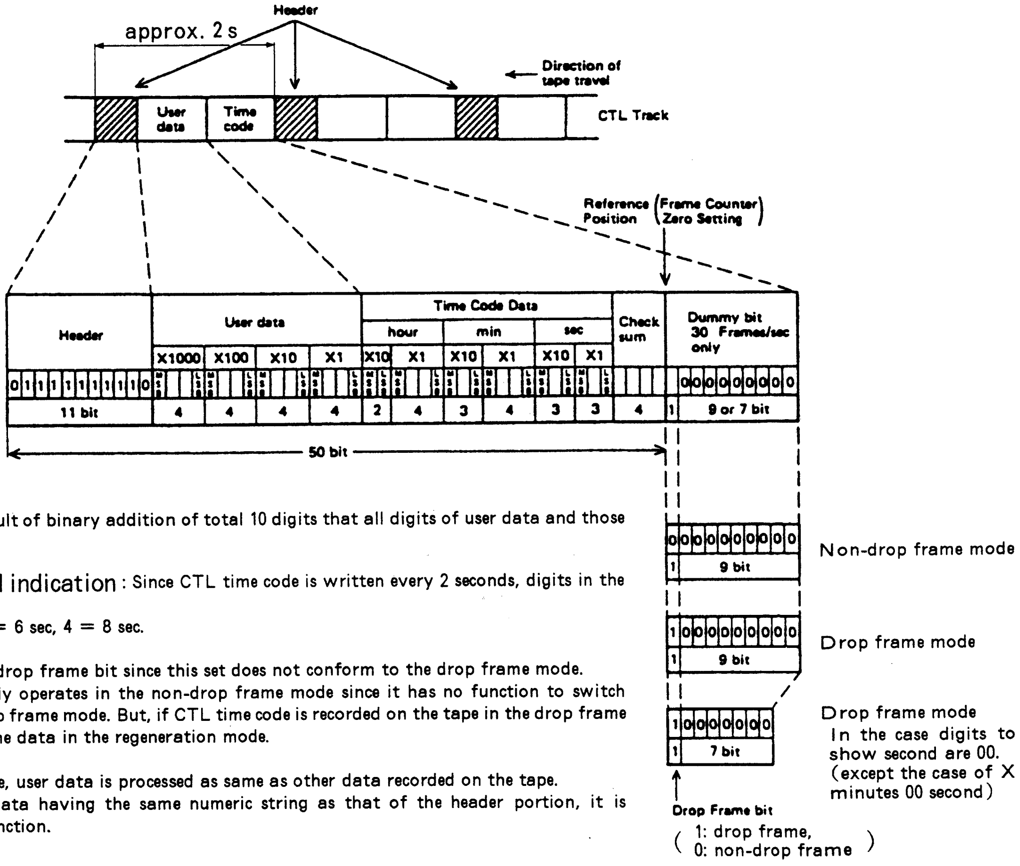
When reading a CTL time code, the reader sums all digits of the data and examines whether the resultant sum of the lower 4 bits accords with the check sum, or not. If the resultant sum accords with the check sum, the reader regards it as a correct data and settles it on. And the CTL time code is regarded as a correct data when the resultant sum continuously accrods with the check sum twice at a tepe speed except ±1× and ±2×. If the CTL time code data cannot be finalized, the reader interpolates it with a value of the CTL counter.
If such a read error occurs, the interpolation mark appears in the on-screen display. However, if data drop occurs only once in continuos data reading, the interpolation mark does not appear in the display.
This set can read CTL time code data in a range from ±1× to ±11× speed, therefore, the CTL interpolation mode is effectuated for data reading at a speed beyond ±1× to ±11× speed.

7.6.4 Writing of CTL time code

For writing CTL time code in LOCAL mode, set the COUNTER switch of the main unit to "TC" or "UB"; on the other hand, to do the same in the REMOTE mode, set the COUNTER switch of the RM-G800 to "TC" or "UB".
This set writes CTL time code in the following cases.

(1) In the Full REC mode just after the tape beginning is detected, the CTL time code is recorded starting with the address "0".
(2) With the RM-G800 connected, CTL time code is written when time code data is preset or CTL time code is inserted.
(3) In the Assembly/Insert editing mode, if a data is finalized in editing play after preroll, the data is recorded in the regeneration mode.
(It needs to set the preroll time for more than 5 sec.)
(4) In the run recording mode, if the CTL time code data is regarded before REC mode, the data is recorded in the regeneration mode.

In the back-space editing, CTL time code cannot be regenerated since back space takes place only for 2 sec.


Header
approx. 2 s
Direction of tape travel
User data
Time code
CTL Track
Reference Position (Frame Counter Zero Setting)
Header
User data
Time Code Data
hour
min
sec
Check sum
Dummy bit 30 Frames/sec only
X1000
X100
X10
X1
X10
X1
X10
X1
X10
X1
0 1 1 1 1 1 1 1 1 1 0
0 0 0 0 0 0 0 0 0
11 bit
4
4
4
4
2
4
3
4
3
3
4
1
9 or 7 bit
50 bit
0 0 0 0 0 0 0 0 0 0
1
9 bit
Non-drop frame mode
1 0 0 0 0 0 0 0 0 0
1
9 bit
Drop frame mode
1 0 0 0 0 0 0 0
1
7 bit
Drop frame mode
In the case digits to show second are 00.
(except the case of X minutes 00 second)
Drop Frame bit
(1: drop frame,
0: non-drop frame)

Check sum : Lower four bits of a result of binary addition of total 10 digits that all digits of user data and those of time code data.

Digit in the 1st place of second indication : Since CTL time code is written every 2 seconds, digits in the 1st place should be read as follows :
0 = 0 sec, 1 = 2 sec, 2 = 4 sec, 3 = 6 sec, 4 = 8 sec.

Drop frame bit : "0" is written as drop frame bit since this set does not conform to the drop frame mode.
Note : In this set the generator generally operates in the non-drop frame mode since it has no function to switch between drop frame mode and non-drop frame mode. But, if CTL time code is recorded on the tape in the drop frame mode, it is reproduced as the drop frame data in the regeneration mode.

User data : In the regeneration mode, user data is processed as same as other data recorded on the tape.
Note : If a user data contains any data having the same numeric string as that of the header portion, it is erroneously read out and causes malfunction.

Fig. 7-6-1 Construction of CTL time code

7.7 HEADS ARRANGEMENT ON UPPER DRUM

(1) BR-S800U

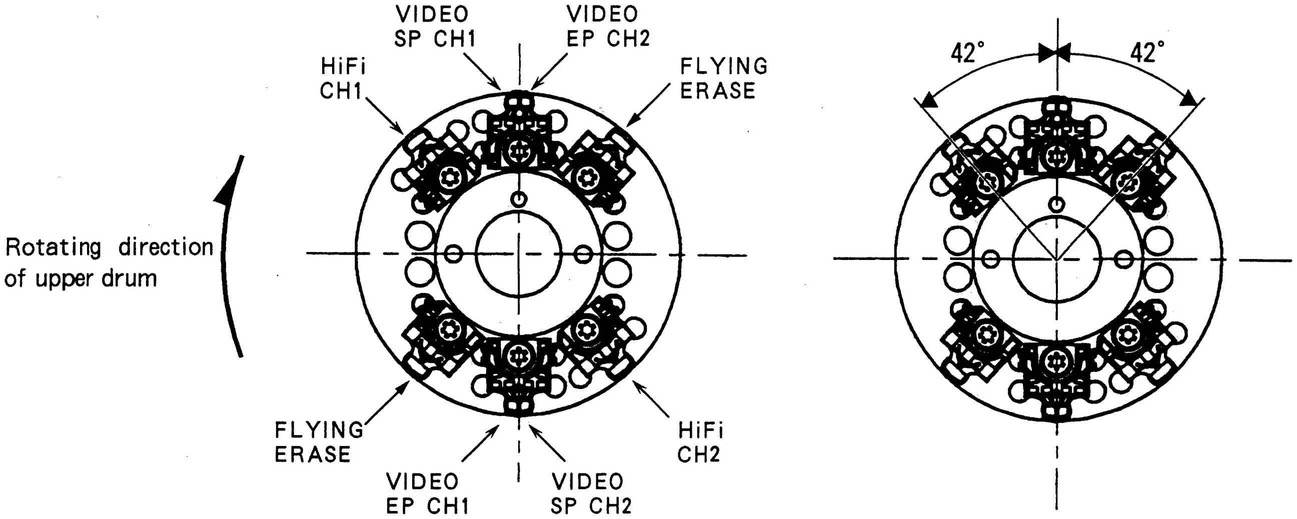

VIDEO SP CH1
VIDEO EP CH2
HiFi CH1
FLYING ERASE
Rotating direction of upper drum
FLYING ERASE
HiFi CH2
VIDEO EP CH1
VIDEO SP CH2
42°
42°

Fig. 7-7-1 BR-S800U heads arrengement

(2) BR-S500U

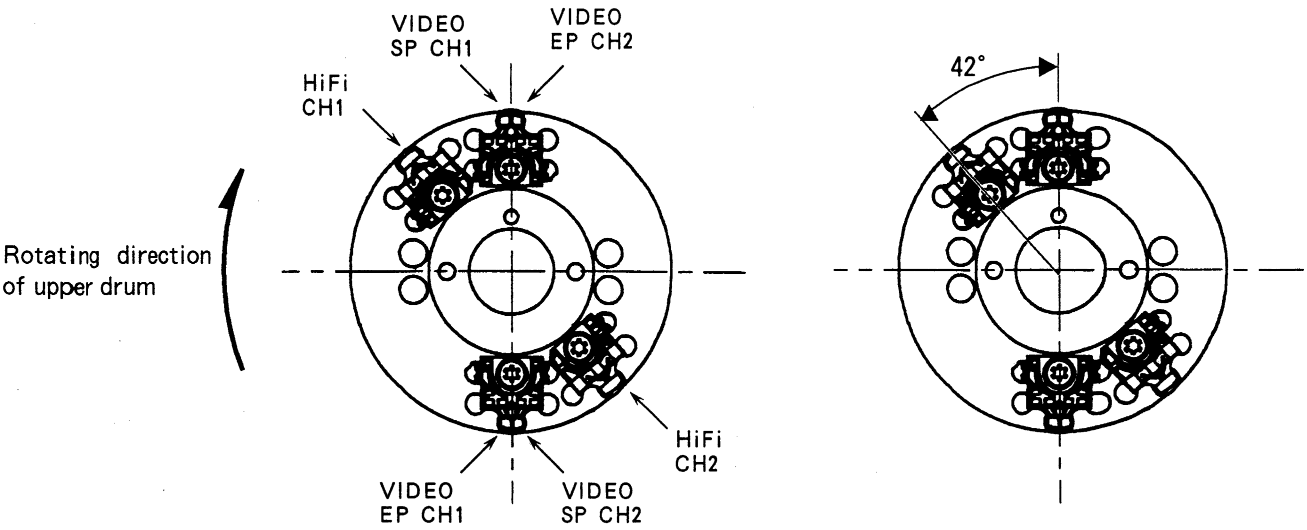

VIDEO SP CH1
VIDEO EP CH2
HiFi CH1
Rotating direction of upper drum
HiFi CH2
VIDEO EP CH1
VIDEO SP CH2
42°

Fig. 7-7-2 BR-S500U heads arrengement